

## WEST Search History

DATE: Monday, June 28, 2004

<u>Hide?</u>	<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>
		<i>DB=USPT,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L8	cilostazol same water adj1 soluble	3
<input type="checkbox"/>	L7	(poloxamer adj3 coat\$) same powder	1
<input type="checkbox"/>	L6	(water adj1 soluble) same poloxamer same aerosol	1
<input type="checkbox"/>	L5	(water adj1 soluble) same poloxamer	190
<input type="checkbox"/>	L4	(water adj1 soluble adj10 drug) same poloxamer	8
<input type="checkbox"/>	L3	(water adj1 soluble adj3 drug) same poloxamer	2
<input type="checkbox"/>	L2	(water adj1 soluble adj3 drug) same coat\$ same poloxamer	0
<input type="checkbox"/>	L1	(hydrophilic or water\$soluble) same coat\$ same poloxamer	25

END OF SEARCH HISTORY

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L1: Entry 13 of 25

File: USPT

Feb 23, 1999

US-PAT-NO: 5874111

DOCUMENT-IDENTIFIER: US 5874111 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Process for the preparation of highly monodispersed polymeric hydrophilic nanoparticles

DATE-ISSUED: February 23, 1999

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Maitra; Amarnath	Delhi-110007			IN
Ghosh; Prashant Kumar	New Delhi-110058			IN
De; Tapas K.	Delhi-110007			IN
Sahoo; Sanjeeb Kumar	Delhi-7			IN

US-CL-CURRENT: 424/499; 424/501, 528/481, 528/482, 528/488

## CLAIMS:

We claim:

1. A process for preparing highly monodispersed polymeric hydrophilic biocompatible nontoxic nanoparticles with water soluble biochemical or chemical drugs entrapped therein having a size of from about 10 nm to 100 nm, comprising the steps of:

(i) dissolving a surfactant in oil to obtain unloaded nanoreactor droplets;

(ii) adding aqueous solutions of hydrogel forming monomers or preformed hydrogel forming polymers, selected from the group consisting of vinyl pyrrolidone, mixtures of vinyl pyrrolidone and polyethyleneglycolfumarate, polymers of polyvinylpyrrolidone, copolymers of polyvinylpyrrolidone and polyethyleneglycolfumarate, bovine serum albumins, and additional amounts of hydrogel monomers or hydrogel preformed polymers; monomeric crosslinking agent; an initiator; and a water soluble biochemical or chemical drug to said nanoreactor droplets to obtain a microemulsion which is optically transparent and containing loaded nanoreactor droplets of aqueous core of from 1 to 10 nanometers in diameter;

(iii) subjecting said microemulsion to polymerization to obtain nanoparticles of a size from about 10 to 100 nanometers;

(iv) drying the polymerized reaction product for removal of solvent to obtain dry nanoparticles and other unreacted materials;

(v) dispersing the dry mass in an aqueous buffer; and

- (vi) separating the surfactant and other toxic materials therefrom.
2. The process as claimed in claim 1 wherein said nanoparticles have a size of 10 nm to 100 nm.
  3. The process as claimed in claim 1 wherein said monomers and preformed polymers are biocompatible and nonantigenic materials selected from the group consisting of vinylpyrrolidone, mixtures of vinylpyrrolidone and polyethyleneglycolfumarate, or their polymers selected from the group consisting of polyvinylpyrrolidone or copolymers of polyvinylpyrrolidone and polyethyleneglycolfumarate.
  4. The process as claimed in claim 1 wherein said polymers are biocompatible antigenic bovine serum albumins.
  5. The process as claimed in claim 1 wherein said cross linking agent is N,N methylene-bis acrylamide (MBA) or glutaraldehyde.
  6. The process as claimed in claim 1 wherein the initiators are water soluble perdisulphate salts and the process further comprises an activator which is tetra methyl ethylene diamine (TMED).
  7. The process as claimed in claim 1 wherein 1% to 10% of the water soluble biochemical or chemical drug by weight of the polymeric material is encapsulated into said nanoparticles.
  8. The process as claimed in claim 1 wherein 0.01M to 0.1M of sodium bis ethyl hexyl sulphosuccinate is used as the surfactant.
  9. The process as claimed in claim 1 wherein said oil is an alkane.
  10. The process as claimed in claim 1 wherein the dried nanoparticles and surfactant after removing solvent are dispersed in buffer solution and then treated with calcium chloride to quantitatively remove the toxic surfactant from the adhering nanoparticles.
  11. The process as claimed in claim 1 wherein the nanoparticles dispersed in aqueous buffer are dialyzed to remove the unreacted and toxic materials from the buffer.
  12. The process as claimed in claim 1 wherein the dispersed nanoparticles after dialysis are lyophilized and preserved.
  13. The process as claimed in claim 1 wherein said microemulsion is a monodispersed optically transparent microemulsion.
  14. The process of claim 1 wherein said oil is n-hexane.

[First Hit](#)   [Fwd Refs](#)

L1: Entry 20 of 25

File: USPT

Aug 7, 1990

US-PAT-NO: 4946686

DOCUMENT-IDENTIFIER: US 4946686 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Solubility modulated drug delivery system

DATE-ISSUED: August 7, 1990

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
McClelland; Gregory A.	Lenexa	KS		
Zentner; Gaylen M.	Lawrence	KS		

US-CL-CURRENT: 424/473; 424/482

## CLAIMS:

What is claimed is:

1. A drug-delivery device for the controlled release of a therapeutically active ingredient into an environment of use which comprises:

(A) a core composition comprising

(a) a plurality of controlled release solubility modulating units which modulate and increase solubility of said therapeutically active ingredient within said core comprising solubility modulating agents each of which is either a complexing agent or a surfactant and which is

(i) surrounded by a water insoluble coat containing at least one pore forming additive dispersed throughout said coat, or

(ii) dispersed in an individual matrix substrate, and

(b) a therapeutically active ingredient; and

(B) a water insoluble microporous wall surrounding said core composition and prepared from

(i) a polymer material that is permeable to water but substantially impermeable to solute and

(ii) 0.1 to 75% by weight, based on the total weight of (i) and (ii), of at least one water leachable pore forming additive dispersed throughout said wall.

2. A drug-delivery device according to claim 1, wherein the solubility modulating agent is an acid

or base selected for adipic acid, citric acid, fumaric acid, tartaric acid, succinic acid, sodium phosphates, potassium phosphates, calcium phosphate, ammonium phosphate, magnesium oxide, magnesium hydroxide, sodium tartrate, tromethamine.

3. A drug-delivery device according to claim 1, wherein the solubility modulating agents are dispersed in individual matrix substrates.

4. A drug delivery device according to claim 1, wherein the therapeutically active agent is selected from the group consisting of lovastatin and simvastatin.

5. A drug-delivery device according to claim 1, wherein the solubility modulating agent is a complexing agent selected from cyclodextrins, polyethylene glycols, polyvinylpyrrolidone, sodium carboxymethylcellulose, salicylic acid, sodium salicylate, mandelic acid, sodium mandelate, caffeine, picric acid, quinhydrone, hydroquinone and tetracycline derivatives, and 2-hydroxyphenyl acetic acid, 2-hydroxynicotinic acid, 3-hydroxy-3-phenyl propionic acid, phthalic acid, 3-4-dihydroxycinnamic acid and the corresponding sodium salts.

6. A drug-delivery device according to claim 1, wherein the solubility modulating agent is surfactant selected from potassium laurate, sodium dodecyl sulfate, hexadecylsulphonic acid, sodium dioctylsulphosuccinate, hexadecyl(cetyl)-trimethylammonium bromide, dodecylpyridinium chloride, dodecylamine hydrochloride, N-dodecyl-N,N-dimethyl betaine, acacia, tragacanth, Igepal, sorbitan esters, polysorbates, Triton-X analogs, Brij analogs, Myrj analogs, pluronics, tetronics, bile salts, bile acids, sulfated, sulfonated, or carboxylated esters, amides, alcohols, ethers, aromatic hydrocarbons, aliphatic hydrocarbons, acylated amino acids and peptides, metal alkyl phosphates, primary, secondary, tertiary or quaternary alkylammonium salts, acylated polyamines, salts of heterocyclic amines, and ethers of polyoxyalkylene glycols, polyhydric alcohols or phenols.

7. A method modulating the controlled release of a therapeutically active ingredient into an environment of use which comprises introducing into an environment of use:

(A) a core composition comprising:

(a) a plurality of controlled release solubility modulating units which modulate and increase solubility of said therapeutically active ingredient within said core comprising solubility modulating agents each of which is a complexing agent or a surfactant and which is either (i) surrounded by a water insoluble coat containing at least one pore forming additive dispersed throughout said coat, or (ii) dispersed in an individual matrix substrate, and

(b) a therapeutically active ingredient; and

(B) a water insoluble microporous wall surrounding said core composition and prepared from

(i) a polymer material that is permeable to water but substantially impermeable to solute and

(ii) 0.1 to 75% by weight, based on the total weight of (i) and (ii), of at least one water leachable pore forming additive dispersed throughout said wall;

thereby increasing the solubility of said therapeutically active agent and releasing into said environment of use associations of said therapeutically active ingredient and solubility modulating

agents.

8. A drug deliver device for the controlled release of a therapeutically active ingredient having not appreciable acid-base character into an environment of use comprising:

(A) a core composition comprising:

(a) a plurality of controlled release solubility modulating units comprising solubility modulating agents each of which is a complexing agent or a surfactant and which is either (i) surrounded by a water insoluble coat containing at least one pore forming additive dispersed throughout said coat, or (ii) dispersed in an individual matrix substrate, and

(b) A therapeutically active ingredient; and

(B) a water insoluble microporous wall surrounding said core composition comprising:

(i) a polymer material that is permeable to water but substantially impermeable to solute and

(ii) 0.1 to 75% by weight, based on the total weight of (i) and (ii), of at least one water leachable pore forming additive dispersed throughout said wall.

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L1: Entry 21 of 25

File: USPT

Feb 27, 1990

US-PAT-NO: 4904479

DOCUMENT-IDENTIFIER: US 4904479 A

TITLE: Drug delivery system

DATE-ISSUED: February 27, 1990

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Illum; Lisbeth	Charlottenlund			DK

US-CL-CURRENT: 424/490; 424/491, 424/493, 424/496, 424/497

## CLAIMS:

I claim:

1. A drug delivery system comprising an active drug as a suspension of colloidal particles, each particle being coated with a material which provides a hydrophilic coat having a thickness of from 100 .ANG. to 154 .ANG. and a steric barrier to particle cell interaction.
2. A drug delivery system as claimed in claim 1 in which the coating material is a polymer which is selected to provide an electrostatic barrier as well as said steric barrier.
3. A drug delivery system as claimed in claim 1 in which the coating material is a polyoxypropylene/polyoxyethylene/ethylenediamine block co-polymer having 9 units of polyoxypropylene and an average weight percentage of 80% polyoxyethylene known as poloxamine 908.
4. A drug delivery system as claimed in claim 1 in which the coating material is a polyoxypropylene/polyoxyethylene/propylene glycol block co-polymer having 4 units of polyoxypropylene and an average weight percentage of 70% polyoxyethylene known as poloxamer 407.
5. A drug delivery system in particulate form which following reconstitution is suitable for injection as a suspension of colloidal particles, said system comprising a plurality of composite particles with each particle comprising an active drug in particulate form coated with a material which provides a hydrophilic coat having a thickness in the range of from 100 .ANG. to 154 .ANG. and a steric barrier to particle cell interaction.

## Hit List

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Search Results - Record(s) 1 through 25 of 25 returned.

☐ 1. Document ID: US 6632447 B1

Using default format because multiple data bases are involved.

L1: Entry 1 of 25

File: USPT

Oct 14, 2003

US-PAT-NO: 6632447

DOCUMENT-IDENTIFIER: US 6632447 B1

TITLE: Method for chemoprevention of prostate cancer

DATE-ISSUED: October 14, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Steiner; Mitchell S.	Germantown	TN		
Raghow; Sharan	Collierville	TN		

US-CL-CURRENT: 424/434; 424/433, 424/452, 424/464, 424/489, 514/648, 514/651,  
514/938, 514/965

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. Data
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☐ 2. Document ID: US 6545077 B2

L1: Entry 2 of 25

File: USPT

Apr 8, 2003

US-PAT-NO: 6545077

DOCUMENT-IDENTIFIER: US 6545077 B2

TITLE: Monofilament dental tapes with substantive coatings

DATE-ISSUED: April 8, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hill; Ira D.	Locust	NJ		
Brown; Dale G.	Wharton	TX		

US-CL-CURRENT: 524/277; 132/321, 132/323, 525/88, 525/92A

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. Data
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☐ 3. Document ID: US 6443942 B1

L1: Entry 3 of 25

File: USPT

Sep 3, 2002

US-PAT-NO: 6443942

DOCUMENT-IDENTIFIER: US 6443942 B1

TITLE: Medication device with protein stabilizing surface coating

DATE-ISSUED: September 3, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Van Antwerp; William Peter	Valencia	CA		
Gulati; Poonam S.	La Canada	CA		
Adomian; Gerald E.	Los Angeles	CA		

US-CL-CURRENT: 604/890.1; 427/2.1, 427/2.24, 427/2.25, 427/2.28, 427/2.3,  
427/407.1, 427/409, 427/508, 604/131, 604/151 , 604/67, 604/70, 604/891.1,  
604/892.1, 623/2.1, 623/924

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw D
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☐ 4. Document ID: US 6423296 B1

L1: Entry 4 of 25

File: USPT

Jul 23, 2002

US-PAT-NO: 6423296

DOCUMENT-IDENTIFIER: US 6423296 B1

TITLE: Constrast media

DATE-ISSUED: July 23, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gunther; Wolfgang	West Chester	PA		
Kellar; Kenneth	Wayne	PA		
Fujii; Dennis Kiyoshi	Downingtown	PA		
Desai; Vinay	Wayne	PA		
Black; Christopher	Wayne	PA		
Beeber; Marshall	Royersford	PA		
Wellons; Jennifer	Wayne	PA		
Fahlvik; Anne Kjersti	Oslo			NO
Singh; Jasbir	Gilbertsville	PA		
Bacon; Edward Richard	Wayne	PA		
McIntire; Gregory Lynn	Wayne	PA		
Snow; Robert Alan	Wayne	PA		

Weekley; Brian	Wayne	PA	
Engell; Torgrim	Oslo		NO
Gacek; Michel	Hovik		NO
Ladd; David Lee	Wayne	PA	
Naevestad; Anne	Oslo		NO
Na; George	Wayne	PA	
Yuan; Barbara	Wayne	PA	
Stevens; Jack	Wayne	PA	

US-CL-CURRENT: [424/9.322](#); [424/9.1](#), [424/9.3](#), [424/9.32](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. D
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☐ 5. Document ID: US 6413535 B1

L1: Entry 5 of 25

File: USPT

Jul 2, 2002

US-PAT-NO: 6413535

DOCUMENT-IDENTIFIER: US 6413535 B1

TITLE: Method for chemoprevention of prostate cancer

DATE-ISSUED: July 2, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Steiner; Mitchell S.	Germantown	TN		
Raghow; Sharan	Collierville	TN		

US-CL-CURRENT: [424/422](#); [424/433](#), [424/434](#), [424/452](#), [424/464](#), [424/489](#), [514/938](#),  
[514/944](#), [514/965](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. D
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☐ 6. Document ID: US 6413534 B1

L1: Entry 6 of 25

File: USPT

Jul 2, 2002

US-PAT-NO: 6413534

DOCUMENT-IDENTIFIER: US 6413534 B1

TITLE: Method for chemoprevention of prostate cancer

DATE-ISSUED: July 2, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Steiner; Mitchell S.	Germantown	TN		
Raghow; Sharan	Collierville	TN		

US-CL-CURRENT: 424/422; 424/433, 424/434, 424/452, 424/464, 424/489, 514/938,  
514/944, 514/965

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. Data
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☐ 7. Document ID: US 6413533 B1

L1: Entry 7 of 25

File: USPT

Jul 2, 2002

US-PAT-NO: 6413533

DOCUMENT-IDENTIFIER: US 6413533 B1

TITLE: Method for chemoprevention of prostate cancer

DATE-ISSUED: July 2, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Steiner; Mitchell S.	Germantown	TN		
Raghow; Sharan	Collierville	TN		

US-CL-CURRENT: 424/422; 424/433, 424/434, 424/452, 424/464, 424/489, 514/938,  
514/944, 514/965

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. Data
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☐ 8. Document ID: US 6410043 B1

L1: Entry 8 of 25

File: USPT

Jun 25, 2002

US-PAT-NO: 6410043

DOCUMENT-IDENTIFIER: US 6410043 B1

TITLE: Method for chemoprevention of prostate cancer

DATE-ISSUED: June 25, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Steiner; Mitchell S.	Germantown	TN		
Raghow; Sharan	Collierville	TN		

US-CL-CURRENT: 424/422; 424/433, 424/434, 424/452, 424/464, 424/489, 514/938,  
514/944, 514/965

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. Data
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☐ 9. Document ID: US 6274133 B1

L1: Entry 9 of 25

File: USPT

Aug 14, 2001

US-PAT-NO: 6274133  
DOCUMENT-IDENTIFIER: US 6274133 B1

TITLE: Method for treating extended-wear contact lenses in the eyes

DATE-ISSUED: August 14, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hu; Zhenze	Pittsford	NY		
Soltys; Christine E.	Rochester	NY		

US-CL-CURRENT: 424/78.04; 514/781, 514/912

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw D
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☐ 10. Document ID: US 6123920 A

L1: Entry 10 of 25

File: USPT

Sep 26, 2000

US-PAT-NO: 6123920  
DOCUMENT-IDENTIFIER: US 6123920 A

TITLE: Superparamagnetic contrast media coated with starch and polyalkylene oxides

DATE-ISSUED: September 26, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gunther; Wolfgang H. H.	Wayne	PA		
Fujii; Dennis Kiyoshi	Wayne	PA		
Kellar; Kenneth Edmund	Wayne	PA		
Black; Christopher Douglass Valiant	Wayne	PA		
Desai; Vinay C.	Wayne	PA		
Beeber; Marshal	Wayne	PA		
Wellons; Jennifer	Wayne	PA		
Fahlvik; Anne Kjersti	Oslo			NO
N.ae buttet.vestad; Anne	Oslo			NO

US-CL-CURRENT: 424/9.322

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw D
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☐ 11. Document ID: US 6037328 A

L1: Entry 11 of 25

File: USPT

Mar 14, 2000

US-PAT-NO: 6037328  
DOCUMENT-IDENTIFIER: US 6037328 A

TITLE: Method and composition for rewetting and preventing deposits on contact lens

DATE-ISSUED: March 14, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hu; Zhenze	Pittsford	NY		
Ellis; Edward J.	Lynnfield	MA		
Denick, Jr.; John	Pittsford	NY		

US-CL-CURRENT: 514/23; 514/772.3

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
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☐ 12. Document ID: US 5980939 A

L1: Entry 12 of 25

File: USPT

Nov 9, 1999

US-PAT-NO: 5980939

DOCUMENT-IDENTIFIER: US 5980939 A

TITLE: Cyclosporin-containing pharmaceutical composition

DATE-ISSUED: November 9, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kim; Jung Woo	Seoul			KR
Shin; Hee Jong	Kyunggi-do			KR
Yang; Su Geon	Seoul			KR

US-CL-CURRENT: 424/455; 424/452, 514/937, 514/962, 514/975

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
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☐ 13. Document ID: US 5874111 A

L1: Entry 13 of 25

File: USPT

Feb 23, 1999

US-PAT-NO: 5874111

DOCUMENT-IDENTIFIER: US 5874111 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Process for the preparation of highly monodispersed polymeric hydrophilic nanoparticles

DATE-ISSUED: February 23, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
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Maitra; Amarnath	Delhi-110007	IN
Ghosh; Prashant Kumar	New Delhi-110058	IN
De; Tapas K.	Delhi-110007	IN
Sahoo; Sanjeeb Kumar	Delhi-7	IN

US-CL-CURRENT: [424/499](#); [424/501](#), [528/481](#), [528/482](#), [528/488](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 14. Document ID: US 5866269 A

L1: Entry 14 of 25

File: USPT

Feb 2, 1999

US-PAT-NO: 5866269

DOCUMENT-IDENTIFIER: US 5866269 A

TITLE: Agricultural mulch with extended longevity

DATE-ISSUED: February 2, 1999

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dalebroux; Dean	Green Bay	WI		
Glanz; Kenneth	Appleton	WI		

US-CL-CURRENT: [428/537.5](#); [428/139](#), [428/147](#), [428/17](#), [428/192](#), [428/198](#), [428/323](#),  
[428/326](#), [428/34.6](#), [428/35.9](#), [428/913](#), [47/32](#), [47/56](#), [47/73](#), [47/79](#), [47/9](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 15. Document ID: US 5846951 A

L1: Entry 15 of 25

File: USPT

Dec 8, 1998

US-PAT-NO: 5846951

DOCUMENT-IDENTIFIER: US 5846951 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Pharmaceutical compositions

DATE-ISSUED: December 8, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gregoriadis; Gregory	Middlesex			GB

US-CL-CURRENT: [514/54](#); [424/450](#), [424/461](#), [514/42](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 16. Document ID: US 5830495 A

L1: Entry 16 of 25

File: USPT

Nov 3, 1998

US-PAT-NO: 5830495

DOCUMENT-IDENTIFIER: US 5830495 A

TITLE: Dental floss with increased loading weight

DATE-ISSUED: November 3, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ochs; Harold D.	Flemington	NJ	08822	

US-CL-CURRENT: 424/443; 424/401

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw. De
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☐ 17. Document ID: US 5788987 A

L1: Entry 17 of 25

File: USPT

Aug 4, 1998

US-PAT-NO: 5788987

DOCUMENT-IDENTIFIER: US 5788987 A

TITLE: Methods for treating early morning pathologies

DATE-ISSUED: August 4, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Busetti; Cesare	Milan			IT
Crimella; Tiziano	Milan			IT

US-CL-CURRENT: 424/480; 424/458, 424/482

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw. De
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☐ 18. Document ID: US 5672434 A

L1: Entry 18 of 25

File: USPT

Sep 30, 1997

US-PAT-NO: 5672434

DOCUMENT-IDENTIFIER: US 5672434 A

TITLE: Mulching composite

DATE-ISSUED: September 30, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dalebroux; Dean G.	Green Bay	WI		
Sands; Peggy D.	Appleton	WI		
Miller; Robert E.	Appleton	WI		
Schleicher; Lowell	Appleton	WI		
Glanz; Kenneth D.	Appleton	WI		

US-CL-CURRENT: 428/537.5; 428/139, 428/147, 428/17, 428/326, 428/34.6, 428/35.9,  
428/913, 442/123, 47/32, 47/73, 47/9

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. D
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☐ 19. Document ID: US 5126146 A

L1: Entry 19 of 25

File: USPT

Jun 30, 1992

US-PAT-NO: 5126146

DOCUMENT-IDENTIFIER: US 5126146 A

TITLE: Cellulosic coating

DATE-ISSUED: June 30, 1992

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Seminoff; Leah A.	Lawrence	KS		
Zentner; Gaylen M.	Lawrence	KS		

US-CL-CURRENT: 424/473; 106/170.1, 106/170.36, 106/170.44, 106/170.46, 106/200.1,  
106/200.2, 106/200.3, 106/202.1, 424/468

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. D
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☐ 20. Document ID: US 4946686 A

L1: Entry 20 of 25

File: USPT

Aug 7, 1990

US-PAT-NO: 4946686

DOCUMENT-IDENTIFIER: US 4946686 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Solubility modulated drug delivery system

DATE-ISSUED: August 7, 1990

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
McClelland; Gregory A.	Lenexa	KS		
Zentner; Gaylen M.	Lawrence	KS		



US-CL-CURRENT: 424/473; 424/482

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMOC	Draw D
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☐ 21. Document ID: US 4904479 A

L1: Entry 21 of 25

File: USPT

Feb 27, 1990

US-PAT-NO: 4904479

DOCUMENT-IDENTIFIER: US 4904479 A

TITLE: Drug delivery system

DATE-ISSUED: February 27, 1990

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Illum; Lisbeth	Charlottenlund			DK

US-CL-CURRENT: 424/490; 424/491, 424/493, 424/496, 424/497

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMOC	Draw D
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☐ 22. Document ID: WO 166109 A1

L1: Entry 22 of 25

File: EPAB

Sep 13, 2001

PUB-NO: WO000166109A1

DOCUMENT-IDENTIFIER: WO 166109 A1

TITLE: ORAL PHARMACEUTICAL COMPOSITIONS CONTAINING N-SULPHONYLINDOLINE DERIVATIVES

PUBN-DATE: September 13, 2001

## INVENTOR-INFORMATION:

NAME	COUNTRY
BLUNDELL, ROSS	GB
FULLER, SIMON JOHN	GB

INT-CL (IPC): A61 K 31/40; A61 K 9/48EUR-CL (EPC): A61K009/48; A61K031/4025

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMOC	Draw D
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☐ 23. Document ID: WO 9702017 A1

L1: Entry 23 of 25

File: EPAB

Jan 23, 1997

PUB-NO: WO009702017A1

DOCUMENT-IDENTIFIER: WO 9702017 A1

TITLE: CONTROLLED RELEASE FORMULATIONS FOR POORLY SOLUBLE DRUGS

PUBN-DATE: January 23, 1997

INVENTOR-INFORMATION:

NAME	COUNTRY
CLANCY, MAURICE JOSEPH ANTHONY	IE
CUMMING, KENNETH IAIN	IE
MYERS, MICHAEL	US

INT-CL (IPC): A61 K 9/14; A61 K 9/20

EUR-CL (EPC): A61K009/14; A61K009/20, A61K009/28 , A61K009/28 , A61K009/48

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWOC	Draw. D
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☐ 24. Document ID: DE 3700911 A1

L1: Entry 24 of 25

File: EPAB

Jul 23, 1987

PUB-NO: DE003700911A1

DOCUMENT-IDENTIFIER: DE 3700911 A1

TITLE: Drug delivery system

PUBN-DATE: July 23, 1987

INVENTOR-INFORMATION:

NAME	COUNTRY
ILLUM, LISBETH	DK

INT-CL (IPC): A61K 9/00

EUR-CL (EPC): A61K009/127; A61K009/50, A61K009/51

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWOC	Draw. D
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☐ 25. Document ID: GB 2185397 A, DE 3700911 C2, DE 3700911 A, GB 2185397 B, US 4904479 A, CH 675539 A, DE 3745193 A1

L1: Entry 25 of 25

File: DWPI

Jul 22, 1987

DERWENT-ACC-NO: 1987-200422

DERWENT-WEEK: 200128

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TITLE: Drug delivery system - comprises particles of active drug, coated with material which prevents take-up of particles by the liver

INVENTOR: ILLUM, L

PRIORITY-DATA: 1986GB-0001100 (January 17, 1986), 1987GB-0000851 (January 15, 1987)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>GB 2185397 A</u>	July 22, 1987		000	

DE 3700911 C2	May 17, 2001	000	A61K009/52
DE 3700911 A	July 23, 1987	000	
GB 2185397 B	November 29, 1989	000	
US 4904479 A	February 27, 1990	000	
CH 675539 A	October 15, 1990	000	
DE 3745193 A1	May 4, 2000	000	A61K009/127

INT-CL (IPC): A61K 9/10; A61K 9/127; A61K 9/14; A61K 9/52; A61K 45/08; A61K 47/00;  
A61K 49/00

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw. D
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Terms	Documents
(hydrophilic or water\$soluble) same coat\$ same poloxamer	25

Display Format:

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First Hit

L8: Entry 2 of 3

File: JPAB

Jul 7, 1998

DOCUMENT-IDENTIFIER: JP 10179722 A  
TITLE: SURFACE TREATMENT

Abstract Text (2):

SOLUTION: A hydrogel and at least one medicine (hereinafter called as a medicine) selected from a water-soluble antithrombotic agent, an antiplatelet agent, and a dissolving agent for thrombus are fixed with a diisocyanate to the surface of a polyurethane and dried to obtain a medical apparatus. The obtd. apparatus slowly released the medicine by contact with an aq. soln. while it maintains the lubricating property of the surface. The hydrogel is, for example, hyaluronic acid, polyvinylpyrrolidone, gelatin and collagen. The antithrombotic agent is, for example, heparin, warfarin and antithrombin, the antiplatelet is, for example, ticlopidine hydrochloride, cilostazol, dipyridamol and sodium citrate for blood transfusion, and the dissolving agent for thrombus is, for example, urokinase.

## WEST Search History

DATE: Monday, June 28, 2004

<u>Hide?</u>	<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>
		<i>DB=USPT,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L13	L10 and (sorbitan adj3 ester)	28
<input type="checkbox"/>	L12	L11 and poloxamer	18
<input type="checkbox"/>	L11	L10 and (water adj1 soluble)	68
<input type="checkbox"/>	L10	L9 and micronize\$	219
<input type="checkbox"/>	L9	(dry adj1 powder) adj3 inhal\$	1537
<input type="checkbox"/>	L8	cilostazol same water adj1 soluble	3
<input type="checkbox"/>	L7	(poloxamer adj3 coat\$) same powder	1
<input type="checkbox"/>	L6	(water adj1 soluble) same poloxamer same aerosol	1
<input type="checkbox"/>	L5	(water adj1 soluble) same poloxamer	190
<input type="checkbox"/>	L4	(water adj1 soluble adj10 drug) same poloxamer	8
<input type="checkbox"/>	L3	(water adj1 soluble adj3 drug) same poloxamer	2
<input type="checkbox"/>	L2	(water adj1 soluble adj3 drug) same coat\$ same poloxamer	0
<input type="checkbox"/>	L1	(hydrophilic or water\$soluble) same coat\$ same poloxamer	25

END OF SEARCH HISTORY

[First Hit](#)   [Fwd Refs](#)

Generate Collection

Print

L12: Entry 8 of 18

File: USPT

May 28, 2002

DOCUMENT-IDENTIFIER: US 6395300 B1

TITLE: Porous drug matrices and methods of manufacture thereof

Brief Summary Text (6):

Other efforts directed at enhancing the rate of dissolution have focused on delivering the drug as a dispersion in a water-soluble or biodegradable matrix, typically in the form of polymeric microparticles. For example, the dissolution rate of dexamethasone reportedly was improved by entrapping the drug in chitosan microspheres made by spray-drying (Genta, et al., S.T.P. Pharma Sciences 5(3):202-07 (1995)). Similarly, others have reported enhanced dissolution rates by mixing a poorly soluble drug powder with a water-soluble gelatin, which purportedly makes the surface of the drug hydrophilic (Imai, et al., J Pharm. Pharmacol, 42:615-19 (1990)).

Brief Summary Text (15):

In a preferred embodiment, the porous drug matrix is reconstituted with an aqueous medium and administered- parenterally, such as intramuscularly, subcutaneously, or intravenously. Alternatively, the porous drug matrix can be further processed using standard techniques into tablets or capsules for oral administration or into rectal suppositories, delivered using a dry powder inhaler for pulmonary administration, or mixed/processed into a cream or ointment for topical administration.

Detailed Description Text (4):

The porous drug matrix is at least 1 to 95%, preferably at least about 10%, and more preferably between about 10 and 60%, drug by weight. The matrices also may contain hydrophilic excipients such as water soluble polymers or sugars, wetting agents such as surfactants, and tonicity agents.

Detailed Description Text (53):

Examples of other drugs useful in the compositions and methods described herein include ceftriaxone, ketoconazole, ceftazidime, oxaprozin, albuterol, valacyclovir, urofollitropin, famciclovir, flutamide, enalapril, mefformin, itraconazole, buspirone, gabapentin, fosinopril, tramadol, acarbose, lorazepam, follitropin, glipizide, omeprazole, fluoxetine, lisinopril, tramadol, levofloxacin, zafirlukast, interferon, growth hormone, interleukin, erythropoietin, granulocyte stimulating factor, nizatidine, bupropion, perindopril, erbumine, adenosine, alendronate, alprostadil, benazepril, betaxolol, bleomycin sulfate, dexfenfluramine, diltiazem, fentanyl, flecainid, gemcitabine, glatiramer acetate, granisetron, lamivudine, mangafodipir trisodium, mesalamine, metoprolol fumarate, metronidazole, miglitol, moexipril, montelukast, octreotide acetate, olopatadine, paricalcitol, somatropin, sumatriptan succinate, tacrine, verapamil, nabumetone, trovafloxacin, dolasetron, zidovudine, finasteride, tobramycin, isradipine, tolcapone, enoxaparin, fluconazole, lansoprazole, terbinafine, pamidronate, didanosine, diclofenac, cisapride, venlafaxine, troglitazone, fluvastatin, losartan, imiglucerase, donepezil, olanzapine, valsartan, fexofenadine, calcitonin, and ipratropium bromide. These drugs are generally considered to be water soluble.

Detailed Description Text (56):

The matrices may contain hydrophilic excipients such as water soluble polymers or sugars which can serve as bulking agents or as wetting agents, wetting agents such

as surfactants or sugars, and tonicity agents. Upon contact with an aqueous medium, water penetrates through the highly porous matrix to dissolve the water soluble excipients in the matrix. In the case of low aqueous solubility drugs, a suspension of drug particles in the aqueous medium is left. The total surface area of the resultant low aqueous solubility drug microparticles is increased relative to the unprocessed drug and the dissolution rate of the drug is increased.

Detailed Description Text (60):

The polymers that can be used in the drug matrices described herein include both synthetic and natural polymers, either non-biodegradable or biodegradable. Representative synthetic polymers include polyethylene glycol ("PEG"), polyvinyl pyrrolidone, polymethacrylates, polylysine, poloxamers, polyvinyl alcohol, polyacrylic acid, polyethylene oxide, and polyethyloxazoline. Representative natural polymers include albumin, alginate, gelatin, acacia, chitosan, cellulose dextran, ficoll, starch, hydroxyethyl cellulose, hydroxypropyl cellulose, hydroxypropylmethyl cellulose, hyaluronic acid, carboxyethyl cellulose, carboxymethyl cellulose, deacetylated chitosan, dextran sulfate, and derivatives thereof. Preferred hydrophilic polymers include PEG, polyvinyl pyrrolidone, poloxamers, hydroxypropyl cellulose, and hydroxyethyl cellulose.

Detailed Description Text (67):

Preferred wetting agents include polyvinylpyrrolidone, polyethylene glycol, tyloxapol, poloxamers such as PLURONIC.TM. F68, F127, and F108, which are block copolymers of ethylene oxide and propylene oxide, and polyamines such as TETRONIC.TM. 908 (also known as POLOXAMINE.TM. 908), which is a tetrafunctional block copolymer derived from sequential addition of propylene oxide and ethylene oxide to ethylenediamine (available from BASF), dextran, lecithin, dialkylesters of sodium sulfosuccinic acid such as AEROSOL.TM. OT, which is a dioctyl ester of sodium sulfosuccinic acid (available from American Cyanamid), DUPONOL.TM. P, which is a sodium lauryl sulfate (available from DuPont), TRITON.TM. X-200, which is an alkyl aryl polyether sulfonate (available from Rohm and Haas), TWEEN.TM. 20 and TWEEN.TM. 80, which are polyoxyethylene sorbitan fatty acid esters (available from ICI Specialty Chemicals), Carbowax 3550 and 934, which are polyethylene glycols (available from Union Carbide), Crodesta F-110, which is a mixture of sucrose stearate and sucrose distearate, and Crodesta SL-40 (both available from Croda Inc.), and SA90HCO, which is C.sub.18 H.sub.37 -CH.sub.2 (CON(CH.sub.3)CH.sub.2 (CHOH).sub.4 CH.sub.2 OH).sub.2.

Detailed Description Text (77):

When the drug is a water soluble drug, aqueous solvents or mixtures of aqueous and organic solvents, such as water-alcohol mixtures, can be used to dissolve the drug.

Detailed Description Text (103):

Alternatively, the matrix can be further processed using standard techniques into tablets or capsules for oral administration, into rectal suppositories, into a dry powder inhaler for pulmonary administration, or mixed/processed into a cream or ointment for topical administration. These standard techniques are described, for example, in Ansel, et al., "Pharmaceutical Dosage Forms and Drug Delivery Systems," 6th Ed., (Williams & Wilkins 1995), which is incorporated herein by reference.

Other Reference Publication (20):

Chiou, et al., "Enhancement of dissolution rates of poorly water-soluble drugs by crystallization in aqueous surfactant solutions I: Sulfathiazole, Prednisone, and Chloramphenicol," J. Pharm. Sci. 65:1702-04 (1976).

Other Reference Publication (42):

Imai, et al., "Enhancement of the dissolution rates of poorly water-soluble drugs by water-soluble gelatin," Chem. Pharm. Bull. (Tokyo). 37(8):2251-52 (1989).

Other Reference Publication (43):

Imai, et al., "Rapidly absorbed solid oral formulations of ibuprofen using water-soluble gelatin," J. Pharm. Pharmacol. 42(9):615-19 (1990).

Other Reference Publication (49):

Kawashima, et al., "Improvement of solubility and dissolution rate of poorly water-soluble salicylic acid by a spray-drying technique," J. Pharm. Pharmacol. 27(1):1-5 (1975).

Other Reference Publication (54):

Kondo, et al., "Pharmacokinetics of a micronized, poorly water-soluble drug, HO-221, in experimental animals," Biol. Pharm. Bull. 16(8):796-800 (1993).

Other Reference Publication (55):

Kubo & Mizobe, "Improvement of dissolution rate and oral bioavailability of a sparingly water-soluble drug, (+/-)-5-[[2-(2-naphthalenylmethyl)-5-benzoxazolyl]-methyl]-2, 4-thiazolidinedione, in co-ground mixture with D-mannitol," Biol. Pharm. Bull. 20(4):460-63 (1997).

Other Reference Publication (79):

Serajuddin, et al., "Improved dissolution of a poorly water-soluble drug from solid dispersions in polyethylene glycol: polysorbate 80 mixtures," J. Pharm. Sci. 79 (5):463-64 (1990).

Other Reference Publication (80):

Serajuddin, et al., "Effects of vehicle amphiphilicity on the dissolution and bioavailability of a poorly water-soluble drug from solid dispersions," J. Pharm. Sci. 77(5):414-17 (1988).

Other Reference Publication (83):

Suzuki & Sunada, "Influence of water-soluble polymers on the dissolution of nifedipine solid dispersions with combined carriers," Chem. Pharm. Bull. 46:482-87 (1998).

Other Reference Publication (86):

Takeuchi, et al., "Enhancement of the dissolution rate of a poorly water-soluble drug (tolbutamide) by a spray-drying solvent deposition method and disintegrants," J. Pharm. Pharmacol. 39(10):769-73 (1987).

Other Reference Publication (95):

Yamaoka, et al., "Comparison of body distribution of poly(vinyl alcohol) with other water-soluble polymers after intravenous administration," J. Pharm. Pharmacol. 47:479-86 (1995).

Other Reference Publication (96):

Yamaoka, et al., "Fate of water-soluble polymers administered via different routes," J. Pharm. Sci. 84(3):349-54 (1995).



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L12: Entry 11 of 18

File: USPT

May 14, 2002

DOCUMENT-IDENTIFIER: US 6387394 B1

TITLE: Controlled release insufflation carrier for medicaments

Brief Summary Text (9):

Increasing attention is now being given in the art to dry powder inhalers.

Brief Summary Text (14):

It would be considered most advantageous in the art to provide new dry powder inhalation formulations which are capable of providing a slow, continuous release of drug while also being biodegradable or expellable from the pulmonary or nasal tract, and in which the active ingredient would be relatively bioavailable.

Brief Summary Text (17):

It is a further object of the present invention to provide a dry powder for oral or nasal inhalation or insufflation which comprises a cohesive composite of carrier and medicament, which provides a controlled release of medicament from the carrier in-vivo.

Brief Summary Text (20):

It is a further object of the present invention to provide a dry powder for inhalation therapy which is bioadhesive and which provides a controlled release of medicament when administered in-vivo.

Brief Summary Text (34):

In general, it has been recognized in the art that dry powder inhalation or insufflation formulations must consist of particles of a size of about 2 microns in diameter in order for the particles, when inhaled, to reach the alveoli of the lungs. Particles larger than 10 microns in diameter are not able to reach the deep lung when inhaled because they are collected on the back of the throat and upper airways in humans, whereas those less than 0.5 microns tend to be re-breathed or exhaled). It is a surprising discovery of this invention, therefore, that when particles are formulated which exhibit bioadhesive release characteristics like those of the present invention, particles in the range of about 0.1 micron do not tend to be exhaled and are suitable for use in inhalation therapy.

Brief Summary Text (36):

It has been found that the dry powder inhalation devices utilized in the prior art are not able to efficiently provide a dose of drug to the alveoli because they do not create enough turbulence. A high turbulence is needed to create shear conditions sufficient to isolate discrete drug particles of a size in the respirable fraction. Generally, one can expect that only 10-15% of the drug payload will be delivered into the deep lung areas for conventional devices, although this can be increased to 40-50% or more in newer devices. Further, due in part to the low efficiency of the delivery of drug to the deep lung areas, and partly due to prior art dry powder formulations themselves, many dry powder inhalation devices are considered to provide too variable a dose of medicament to be considered useful for many such medicaments.

Brief Summary Text (38):

The invention relates in part to a dry powder inhalation/insufflation formulation

which comprises a cohesive composite of a medicament together with a non-segregating carrier. In the aspects of the invention where the dry powder inhalation formulations of the invention are intended for lung delivery, at least 80% of the discrete polysaccharide/drug particles have an average particle size of from about 0.1 to about 10 microns. In other aspects where the drug/polysaccharide fine particles are carried on coarse saccharide particles, the composite particles will have an average particle size of from about 45 to about 355 microns, and preferably from about 63 to about 125 microns. In this manner, the cohesive composite particles, when inhaled via any dry powder inhalation device known in the art, will either be collected and absorbed mainly in the tracheo-bronchial region of the respiratory tract for 2-10 micron particles and in the deep lung for <2 micron particles. The carrier which is utilized to prepare the cohesive composite particles is one which will provide a controlled release of medicament when the particles are exposed to an environmental fluid, e.g., a dissolution liquid, mobile phase or water in an in-vitro dissolution apparatus, or, in the fluids present in the respiratory tract, and in particular, in the tracheo-bronchial regions in-vivo.

Brief Summary Text (40):

The term "heteropolysaccharide" as used in the present invention is defined as a water-soluble polysaccharide containing two or more kinds of sugar sub-units, the heteropolysaccharide having a branched or helical configuration, and having excellent water-wicking properties and immense thickening properties.

Brief Summary Text (44):

Starch and starch fragments are especially preferred polysaccharides and the combination of xanthan gum with locust bean gum is an especially preferred gum combination. In our previous patents, we described and claimed the synergistic combination of heteropolysaccharide/homopolysaccharide gums for incorporation into solid oral dosage forms. Thus, in certain embodiments, the controlled release properties of the dry powder inhalation formulation are optimized when the ratio of heteropolysaccharide gum to galactomannan gum is from about 3:1 to about 1:3, and most preferably about 1:1. However, in this embodiment, the controlled release carrier of the invention may comprise from about 1% to about 99% by weight heteropolysaccharide gum and from about 99% to about 1% by weight homopolysaccharide gum.

Brief Summary Text (48):

Other suitable pharmaceutically acceptable surfactants/co-solvents (solubilizing) agents include acacia, benzalkonium chloride, cholesterol, emulsifying wax, docusate sodium, glyceryl monostearate, lanolin alcohols, lecithin, poloxamer, poloxyethylene castor oil derivatives, poloxyethylene sorbitan fatty acid esters, poloxyethylene stearates, sodium lauryl sulfates, sorbitan esters, stearic acid, and triethanolamine.

Brief Summary Text (52):

The dry powder insufflation/inhalation formulations are preferably prepared via a wet granulation method to obtain composite particles of medicament and carrier in the desired respirable size range (depending on whether designed for naso-pharyngeal depositions, shallow lung or deep lung deposition, or some combination thereof). In certain embodiments, such composites are provided via the use of one or more wet granulation steps. However, the dry powder formulations of the invention may be prepared according to any technique to yield an acceptable product.

Brief Summary Text (54):

a drug is dissolved in a suitable solvent (e.g., water, alcohol, mixed solvents, etc.) and added to a polysaccharide or polysaccharide mixture in the desired size range. For oral insufflations, this will be 80% less than 10 microns; for nasal insufflations, the desired size range will be about 10 to about 355 microns. Where

required, the polysaccharides can be sieved to obtain the required size. In case where the polysaccharide requires size reduction, a suitable milling method may be used, such as fluid energy milling (e.g., with micronizers or jet mills); hammer milling, vibrational milling, ball milling, etc. In some cases, it will be more beneficial to carry out the milling procedure below the glass transition temperature or for other reasons, to use cryogenic milling (using liquid CO.sub.2, N.sub.2, or other suitable cooling aid).

Brief Summary Text (63):

A wide variety of medicaments can be utilized in the dry powder inhalation/insufflation formulations of the present invention. In general, medicaments which may be used in conjunction with the invention are preferably locally acting on the pulmonary tissue and/or be absorbable from the respiratory tract in sufficient quantities to provide a therapeutically desired effect.

Brief Summary Text (88):

Another inhaler device is disclosed in U.S. Pat. No. 4,524,769 (Wetterlin), hereby incorporated by reference. Wetterline describes a dosage inhaler for administering a micronized pharmacologically active substance to a patient. The inhaler includes a gas conduit means through which gas passes for carrying the micronized substance to be administered. The inhaler further includes a membrane having a plurality of preselected perforated portions, each portion adapted to hold and dispense a reproducible unit dose of less than 50 mg of said active substance, in dry powder form. The powder particles have particle size of less than 5 micrometers. The membrane is movably connected to the gas conduit means so that one of the preselected portions can be positioned within the gas conduit means so that the substance held in the preselected portion may be dispensed. The remaining preselected portion can be in a position external to said gas conduit means to receive said active substance. The membrane is movable through a plurality of positions whereby each preselected portion of the membrane can be successively positioned within the gas conduit to dispense the unit dose of the active substance held therein. Each preselected portion from which the active substance has been dispensed can be moved to said external position to receive active substance.

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L12: Entry 15 of 18

File: USPT

Feb 13, 2001

DOCUMENT-IDENTIFIER: US 6187765 B1

TITLE: Mometasone furoate suspensions for nebulization

Brief Summary Text (3):

Use of inhaled therapeutic substances has become common for the treatment of airway disorders, such disorders including, without limitation thereto, asthma, infections, emphysema and various inflammatory conditions. Substances commonly delivered to the lower airway surfaces, that is, the trachea, bronchial tree and lungs, by oral or nasal inhalation include bronchodilators, corticosteroids, anti-infectives and anti-inflammatory medicaments. Various methods have been used for such delivery, including pressurized metered dose inhalers, dry powder inhalers and nebulizers.

Brief Summary Text (6):

The typical nebulized medication is a water-soluble substance which can form relatively dilute aqueous solutions. This is desired, due to the relatively large volumes of solution which will be entrained in an inhaled air stream, and to the very small quantities of drug which will typically be delivered in a single treatment. Handling of a drug solution is quite uncomplicated: a desired volume of a solution (usually aqueous) is either nebulized directly or is measured into a larger volume of sterile water for nebulization.

Brief Summary Text (7):

However, some very useful inhalation drugs have little or essentially no water solubility. Examples of such drugs are corticosteroids, typically administered in the treatment of asthma by inhalation from pressurized metered dose inhalers, either in alcohol solution or as suspended micronized particles, or from dry powder inhalers of various types.

Brief Summary Text (11):

The invention comprises an aqueous suspension of micronized mometasone furoate monohydrate, also containing a nonionic surfactant, a soluble salt and optionally a pH buffer. Preferred surfactants are those known as polysorbates. The soluble salt may be sodium chloride, in amounts needed to render the solution phase isotonic. When the buffer is present, it preferably will be chosen to maintain a solution pH between about 3 and about 7.

Detailed Description Text (14):

Useful surfactants also include the "Poloxamers," which are block polymers of polyoxyethylene and polyoxypropylene, generally corresponding to the following formula:

Detailed Description Text (15):

Representative commercially available poloxamer surfactants are listed in the following table, wherein the CTFA designation (Poloxamer number) and average values of x, y and z are given.

Detailed Description Text (16):

Poloxamer surfactants are used at concentrations similar to those for the Polysorbates, although certain members are useful at concentrations up to about 1

mg/mL.

Detailed Description Text (21):

Sterility or adequate antimicrobial preservation of the final packaged formulation is needed for patient protection. The use of antimicrobial preservatives is less desirable, since certain of these have been associated with adverse clinical effects, such as bronchospasm. Alternative processes which may be considered for achieving sterility usually will not include sterilization steps for the micronized drug substance or formulation, since it has been found that the drug undergoes degradation under the influence of gamma-ray irradiation and sterilizing heat conditions. Sterilization by filtration ordinarily will not be feasible, due to the suspension nature of the formulation. Thus, it is preferred to produce the mometasone furoate monohydrate under sterile conditions, conduct the drug micronization in a sterile environment, and perform a sterile packaging operation.

Detailed Description Text (44):

(5) transfer the micronized mometasone furoate suspension from the recirculation vessel to the vessel of step (2);

Detailed Description Paragraph Table (2):

Poloxamer	x	y	z	101	2	16	2	105	11	16	11	108	46	16	46	122	5	21	5	123	7	21	7	124	11	
21	11	181	3	30	3	182	8	30	8	183	10	30	10	184	13	30	13	185	19	30	19	188	75	30	75	212
8	35	8	215	24	35	24	217	52	35	52	231	6	39	6	234	22	39	22	235	27	39	27	237	62	39	62
238	97	39	97	282	10	47	10	284	21	47	21	288	122	47	122	331	7	54	7	333	20	54	20	334		
31	54	31	335	38	54	38	338	128	54	128	401	6	67	6	402	13	67	13	403	21	67	21	407	98	67	98

CLAIMS:

5. The suspension of claim 1, wherein the surfactant comprises a Poloxamer surfactant.

[First Hit](#)   [Fwd Refs](#)

Generate Collection

Print

L12: Entry 16 of 18

File: USPT

Apr 14, 1998

DOCUMENT-IDENTIFIER: US 5738865 A

TITLE: Controlled release insufflation carrier for medicaments

Brief Summary Text (9):

Increasing attention is now being given in the art to dry powder inhalers.

Brief Summary Text (14):

It would be considered most advantageous in the art to provide new dry powder inhalation formulations which are capable of providing a slow, continuous release of drug while also being biodegradable or expellable from the pulmonary or nasal tract, and in which the active ingredient would be relatively bioavailable.

Brief Summary Text (17):

It is a further object of the present invention to provide a dry powder for oral or nasal inhalation or insufflation which comprises a cohesive composite of carrier and medicament, which provides a controlled release of medicament from the carrier in-vivo.

Brief Summary Text (20):

It is a further object of the present invention to provide a dry powder for inhalation therapy which is bioadhesive and which provides a controlled release of medicament when administered in-vivo.

Brief Summary Text (34):

In general, it has been recognized in the art that dry powder inhalation or insufflation formulations must consist of particles of a size of about 2 microns in diameter in order for the particles, when inhaled, to reach the alveoli of the lungs. Particles larger than 10 microns in diameter are not able to reach the deep lung when inhaled because they are collected on the back of the throat and upper airways in humans, whereas those less than 0.5 microns tend to be re-breathed or exhaled). It is a surprising discovery of this invention, therefore, that when particles are formulated which exhibit bioadhesive release characteristics like those of the present invention, particles in the range of about 0.1 micron do not tend to be exhaled and are suitable for use in inhalation therapy.

Brief Summary Text (36):

It has been found that the dry powder inhalation devices utilized in the prior art are not able to efficiently provide a dose of drug to the alveoli because they do not create enough turbulence. A high turbulence is needed to create shear conditions sufficient to isolate discrete drug particles of a size in the respirable fraction. Generally, one can expect that only 10-15% of the drug payload will be delivered into the deep lung areas for conventional devices, although this can be increased to 40-50% or more in newer devices. Further, due in part to the low efficiency of the delivery of drug to the deep lung areas, and partly due to prior art dry powder formulations themselves, many dry powder inhalation devices are considered to provide too variable a dose of medicament to be considered useful for many such medicaments.

Brief Summary Text (38):

The invention relates in part to a dry powder inhalation/insufflation formulation

which comprises a cohesive composite of a medicament together with a non-segregating carrier. In the aspects of the invention where the dry powder inhalation formulations of the invention are intended for lung delivery, at least 80% of the discrete polysaccharide/drug particles have an average particle size of from about 0.1 to about 10 microns. In other aspects where the drug/polysaccharide fine particles are carried on coarse saccharide particles, the composite particles will have an average particle size of from about 45 to about 355 microns, and preferably from about 63 to about 125 microns. In this manner, the cohesive composite particles, when inhaled via any dry powder inhalation device known in the art, will either be collected and absorbed mainly in the tracheo-bronchial region of the respiratory tract for 2-10 micron particles and in the deep lung for <2 micron particles. The carrier which is utilized to prepare the cohesive composite particles is one which will provide a controlled release of medicament when the particles are exposed to an environmental fluid, e.g., a dissolution liquid, mobile phase or water in an in-vitro dissolution apparatus, or, in the fluids present in the respiratory tract, and in particular, in the tracheo-bronchial regions in-vivo.

Brief Summary Text (40):

The term "heteropolysaccharide" as used in the present invention is defined as a water-soluble polysaccharide containing two or more kinds of sugar sub-units, the heteropolysaccharide having a branched or helical configuration, and having excellent water-wicking properties and immense thickening properties.

Brief Summary Text (44):

Starch and starch fragments are especially preferred polysaccharides and the combination of xanthan gum with locust bean gum is an especially preferred gum combination. In our previous patents, we described and claimed the synergistic combination of heteropolysaccharide/homopolysaccharide gums for incorporation into solid oral dosage forms. Thus, in certain embodiments, the controlled release properties of the dry powder inhalation formulation are optimized when the ratio of heteropolysaccharide gum to galactomannan gum is from about 3:1 to about 1:3, and most preferably about 1:1. However, in this embodiment, the controlled release carrier of the invention may comprise from about 1% to about 99% by weight heteropolysaccharide gum and from about 99% to about 1% by weight homopolysaccharide gum.

Brief Summary Text (48):

Other suitable pharmaceutically acceptable surfactants/co-solvents (solubilizing) agents include acacia, benzalkonium chloride, cholesterol, emulsifying wax, docusate sodium, glyceryl monostearate, lanolin alcohols, lecithin, poloxamer, poloxyethylene castor oil derivatives, poloxyethylene sorbitan fatty acid esters, poloxyethylene stearates, sodium lauryl sulfates, sorbitan esters, stearic acid, and triethanolamine.

Brief Summary Text (52):

The dry powder insufflation/inhalation formulations are preferably prepared via a wet granulation method to obtain composite particles of medicament and carrier in the desired respirable size range (depending on whether designed for naso-pharyngeal depositions, shallow lung or deep lung deposition, or some combination thereof). In certain embodiments, such composites are provided via the use of one or more wet granulation steps. However, the dry powder formulations of the invention may be prepared according to any technique to yield an acceptable product.

Brief Summary Text (54):

a drug is dissolved in a suitable solvent (e.g., water, alcohol, mixed solvents, etc.) and added to a polysaccharide or polysaccharide mixture in the desired size range. For oral insufflations, this will be 80% less than 10 microns; for nasal insufflations, the desired size range will be about 10 to about 355 microns. Where

required, the polysaccharides can be sieved to obtain the required size. In cases where the polysaccharide requires size reduction, a suitable milling method may be used, such as fluid energy milling (e.g., with micronizers or jet mills); hammer milling, vibrational milling, ball milling, etc. In some cases, it will be more beneficial to carry out the milling procedure below the glass transition temperature or for other reasons, to use cryogenic milling (using liquid CO.sub.2, N.sub.2, or other suitable cooling aid).

Brief Summary Text (63):

A wide variety of medicaments can be utilized in the dry powder inhalation/insufflation formulations of the present invention. In general, medicaments which may be used in conjunction with the invention are preferably locally acting on the pulmonary tissue and/or be absorbable from the respiratory tract in sufficient quantities to provide a therapeutically desired effect. Such medicaments include the following:

Brief Summary Text (87):

Another inhaler device is disclosed in U.S. Pat. No. 4,524,769 (Wetterlin), hereby incorporated by reference. Wetterlin describes a dosage inhaler for administering a micronized pharmacologically active substance to a patient. The inhaler includes a gas conduit means through which gas passes for carrying the micronized substance to be administered. The inhaler further includes a membrane having a plurality of preselected perforated portions, each portion adapted to hold and dispense a reproducible unit dose of less than 50 mg of said active substance, in dry powder form. The powder particles have a particle size of less than 5 micrometers. The membrane is movably connected to the gas conduit means so that one of the preselected portions can be positioned within the gas conduit means so that the substance held in the preselected portion may be dispensed. The remaining preselected portion can be in a position external to said gas conduit means to receive said active substance. The membrane is movable through a plurality of positions whereby each preselected portion of the membrane can be successively positioned within the gas conduit to dispense the unit dose of the active substance held therein. Each preselected portion from which the active substance has been dispensed can be moved to said external position to receive active substance.



## Hit List

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Search Results - Record(s) 1 through 18 of 18 returned.

☐ 1. Document ID: US 6740655 B2

Using default format because multiple data bases are involved.

L12: Entry 1 of 18

File: USPT

May 25, 2004

US-PAT-NO: 6740655

DOCUMENT-IDENTIFIER: US 6740655 B2

TITLE: Pyrimidine carboxamides useful as inhibitors of PDE4 isozymes

DATE-ISSUED: May 25, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Magee; Thomas Victor	Mystic	CT		
Marfat; Anthony	Mystic	CT		
Chambers; Robert James	Mystic	CT		

US-CL-CURRENT: 514/255.05; 514/269, 544/319

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KIMC	Draw. De
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☐ 2. Document ID: US 6699862 B1

L12: Entry 2 of 18

File: USPT

Mar 2, 2004

US-PAT-NO: 6699862

DOCUMENT-IDENTIFIER: US 6699862 B1

TITLE: Indolyl-2-phenyl bisamidines useful as antiproliferative agents

DATE-ISSUED: March 2, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Goldstein; Steven W.	Noank	CT		
Mylari; Banauara L.	Waterford	CT		
Perez; Jose R.	Salem	CT		
Glazer; Edward A.	Waterford	CT		

US-CL-CURRENT: 514/235.2; 514/254.09, 514/256, 514/402, 514/415, 544/143, 544/296,

[544/333](#), [548/312.1](#), [548/505](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMMC	Draw D
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☐ 3. Document ID: US 6668527 B2

L12: Entry 3 of 18

File: USPT

Dec 30, 2003

US-PAT-NO: 6668527

DOCUMENT-IDENTIFIER: US 6668527 B2

TITLE: Non-peptidyl inhibitors of VLA-4 dependent cell binding useful in treating inflammatory, autoimmune, and respiratory diseases

DATE-ISSUED: December 30, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Duplantier; Allen J.	Ledyard	CT		
Chupak; Louis S.	Old Saybrook	CT		
Milici; Anthony J.	Branford	CT		
Lau; Wan F.	Noank	CT		

US-CL-CURRENT: [514/378](#); [546/271.4](#), [546/272.1](#), [548/215](#), [548/240](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMMC	Draw D
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☐ 4. Document ID: US 6667331 B2

L12: Entry 4 of 18

File: USPT

Dec 23, 2003

US-PAT-NO: 6667331

DOCUMENT-IDENTIFIER: US 6667331 B2

TITLE: Non-peptidyl inhibitors of VLA-4 dependent cell binding useful in treating inflammatory, autoimmune, and respiratory diseases

DATE-ISSUED: December 23, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Duplantier; Allen J.	Ledyard	CT		
Chupak; Louis S.	Old Saybrook	CT		
Milici; Anthony J.	Branford	CT		
Lau; Wan F.	Noank	CT		

US-CL-CURRENT: [514/378](#); [514/374](#), [514/408](#), [546/271.4](#), [546/272.1](#), [548/215](#), [548/240](#), [548/517](#), [548/518](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMMC	Draw D
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☐ 5. Document ID: US 6649633 B2

L12: Entry 5 of 18

File: USPT

Nov 18, 2003

US-PAT-NO: 6649633

DOCUMENT-IDENTIFIER: US 6649633 B2

TITLE: Nicotinamide biaryl derivatives useful as inhibitors of PDE4 isozymes

DATE-ISSUED: November 18, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chambers; Robert J.	Mystic	CT		
Marfat; Anthony	Mystic	CT		
Magee; Thomas V.	Mystic	CT		

US-CL-CURRENT: 514/337; 514/338, 514/355, 514/357, 514/358, 546/283.4, 546/283.7,  
546/284.1, 546/316, 546/329, 546/347

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. D
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☐ 6. Document ID: US 6645528 B1

L12: Entry 6 of 18

File: USPT

Nov 11, 2003

US-PAT-NO: 6645528

DOCUMENT-IDENTIFIER: US 6645528 B1

**\*\* See image for Certificate of Correction \*\***

TITLE: Porous drug matrices and methods of manufacture thereof

DATE-ISSUED: November 11, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Straub; Julie	Winchester	MA		
Bernstein; Howard	Cambridge	MA		
Chickering, III; Donald E.	Framingham	MA		
Khattak; Sarwat	Cambridge	MA		
Randall; Greg	Stoneham	MA		

US-CL-CURRENT: 424/489; 514/951

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. D
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☐ 7. Document ID: US 6559168 B2

L12: Entry 7 of 18

File: USPT

May 6, 2003

US-PAT-NO: 6559168

DOCUMENT-IDENTIFIER: US 6559168 B2

TITLE: Thiazolyl-acid amide derivatives useful as inhibitors of PDE4 isozymes

DATE-ISSUED: May 6, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Marfat; Anthony	Mystic	CT		
McKechney; Michael William	Fairport	NY		

US-CL-CURRENT: 514/338; 514/342, 514/369, 514/370, 546/269.7, 548/188, 548/195,  
548/196

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 8. Document ID: US 6395300 B1

L12: Entry 8 of 18

File: USPT

May 28, 2002

US-PAT-NO: 6395300

DOCUMENT-IDENTIFIER: US 6395300 B1

TITLE: Porous drug matrices and methods of manufacture thereof

DATE-ISSUED: May 28, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Straub; Julie	Winchester	MA		
Bernstein; Howard	Cambridge	MA		
Chickering, III; Donald E.	Framingham	MA		
Khattak; Sarwat	Cambridge	MA		
Randall; Greg	Stoneham	MA		

US-CL-CURRENT: 424/489; 264/5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 9. Document ID: US 6392036 B1

L12: Entry 9 of 18

File: USPT

May 21, 2002

US-PAT-NO: 6392036

DOCUMENT-IDENTIFIER: US 6392036 B1

**\*\* See image for Certificate of Correction \*\***

TITLE: Dry heat sterilization of a glucocorticosteroid

DATE-ISSUED: May 21, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Karlsson; Ann-Kristin	Staffanstorp			SE
Larrivee-Elkins; Cheryl	Framingham	MA		
Molin; Ove	Huddinge			SE

US-CL-CURRENT: 540/63; 540/84, 540/85

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Drawings
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☐ 10. Document ID: US 6391872 B1

L12: Entry 10 of 18

File: USPT

May 21, 2002

US-PAT-NO: 6391872

DOCUMENT-IDENTIFIER: US 6391872 B1

TITLE: Indazole bioisostere replacement of catechol in therapeutically active compounds

DATE-ISSUED: May 21, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Marfat; Anthony	Mystic	CT		

US-CL-CURRENT: 514/218; 514/253.01, 514/254.06, 514/257, 514/403, 540/575, 544/251, 544/363, 544/371, 548/361.1, 548/362.5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Drawings
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☐ 11. Document ID: US 6387394 B1

L12: Entry 11 of 18

File: USPT

May 14, 2002

US-PAT-NO: 6387394

DOCUMENT-IDENTIFIER: US 6387394 B1

TITLE: Controlled release insufflation carrier for medicaments

DATE-ISSUED: May 14, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Baichwal; Anand	Wappingers Falls	NY		
Staniforth; John N.	Bath			GB

US-CL-CURRENT: [424/440](#); [424/434](#), [424/499](#), [424/500](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw. De
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☐ 12. Document ID: US 6355662 B1

L12: Entry 12 of 18

File: USPT

Mar 12, 2002

US-PAT-NO: 6355662

DOCUMENT-IDENTIFIER: US 6355662 B1

TITLE: Non-peptidyl inhibitors of a VLA-4 dependent cell binding useful in treating inflammatory, autoimmune, and respiratory diseases

DATE-ISSUED: March 12, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Duplantier; Allen Jacob	Ledyard	CT		
Milici; Anthony John	Branford	CT		
Chupak; Louis Stanley	Old Saybrook	CT		

US-CL-CURRENT: [514/374](#); [514/596](#), [514/597](#), [548/235](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw. De
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☐ 13. Document ID: US 6329412 B1

L12: Entry 13 of 18

File: USPT

Dec 11, 2001

US-PAT-NO: 6329412

DOCUMENT-IDENTIFIER: US 6329412 B1

TITLE: Bisamidine compounds as antiproliferative agents

DATE-ISSUED: December 11, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Goldstein; Steven W.	Noank	CT		
Mylari; Banauara L.	Waterford	CT		
Perez; Jose R.	Salem	CT		
Glazer; Edward A.	Waterford	CT		

US-CL-CURRENT: [514/385](#); [514/394](#), [514/415](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw. De
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☐ 14. Document ID: US 6306887 B1

L12: Entry 14 of 18

File: USPT

Oct 23, 2001

US-PAT-NO: 6306887

DOCUMENT-IDENTIFIER: US 6306887 B1

TITLE: Non-peptidyl inhibitors of VLA-4 dependent cell binding useful in treating inflammatory, autoimmune, and respiratory diseases

DATE-ISSUED: October 23, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chupak; Louis S.	Old Saybrook	CT		
Duplantier; Allen J.	Ledyard	CT		
Milici; Anthony J.	Branford	CT		

US-CL-CURRENT: 514/378; 514/365, 514/372, 514/374, 514/381, 514/383, 514/385,  
514/396, 514/403, 514/461, 548/125, 548/146, 548/206, 548/215, 548/240, 548/250,  
548/252, 548/262.2, 548/300.1, 548/311.1, 548/356.1, 548/364.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
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☐ 15. Document ID: US 6187765 B1

L12: Entry 15 of 18

File: USPT

Feb 13, 2001

US-PAT-NO: 6187765

DOCUMENT-IDENTIFIER: US 6187765 B1

TITLE: Mometasone furoate suspensions for nebulization

DATE-ISSUED: February 13, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Harris; David	New Providence	NJ		
Sequeira; Joel A.	Edison	NJ		
Chaudry; Imtiaz A.	North Caldwell	NJ		

US-CL-CURRENT: 514/172; 424/43, 424/45, 514/826, 514/958

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
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☐ 16. Document ID: US 5738865 A

L12: Entry 16 of 18

File: USPT

Apr 14, 1998

US-PAT-NO: 5738865

DOCUMENT-IDENTIFIER: US 5738865 A

TITLE: Controlled release insufflation carrier for medicaments

DATE-ISSUED: April 14, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Baichwal; Anand	Wappingers Falls	NY		
Staniforth; John N.	Bath			GB2

US-CL-CURRENT: 424/440; 424/434, 424/499, 424/500

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachment	Claims	KWIC	Draw. De
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☐ 17. Document ID: US 5612053 A

L12: Entry 17 of 18

File: USPT

Mar 18, 1997

US-PAT-NO: 5612053

DOCUMENT-IDENTIFIER: US 5612053 A

TITLE: Controlled release insufflation carrier for medicaments

DATE-ISSUED: March 18, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Baichwal; Anand	Wappingers Falls	NY		
Staniforth; John N.	Bath			GB2

US-CL-CURRENT: 424/440; 424/434, 424/488, 424/499, 424/500

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachment	Claims	KWIC	Draw. De
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☐ 18. Document ID: AU 2002316820 A1, WO 200280884 A2, US 20030007932 A1, EP 1372610 A2

L12: Entry 18 of 18

File: DWPI

Oct 21, 2002

DERWENT-ACC-NO: 2003-229202

DERWENT-WEEK: 200433

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TITLE: Pharmaceutical dosage forms useful in dry powder inhalation devices comprises at least one micronized or spray dried water soluble solid active ingredient and a fatty acid or alcohol derivative or a poloxamer

INVENTOR: BECHTOLD-PETERS, K; NGUYEN, H ; ROWLEY, G

PRIORITY-DATA: 2001GB-0007106 (March 21, 2001)

PATENT-FAMILY:



PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>AU 2002316820 A1</u>	October 21, 2002		000	A61K009/14
<u>WO 200280884 A2</u>	October 17, 2002	E	029	A61K009/14
<u>US 20030007932 A1</u>	January 9, 2003		000	A61L009/04
<u>EP 1372610 A2</u>	January 2, 2004	E	000	A61K009/14

INT-CL (IPC): A61 K 9/14; A61 K 9/16; A61 K 47/00; A61 K 47/10; A61 K 47/26; A61 L 9/04; A61 P 11/00

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw D
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Terms	Documents
L11 and poloxamer	18

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L13: Entry 7 of 28

File: USPT

Oct 28, 2003

DOCUMENT-IDENTIFIER: US 6638495 B2

TITLE: Stabilized preparation for use in metered dose inhalers

Brief Summary Text (5):

The three most common systems presently used to deliver drugs locally to the pulmonary air passages are dry powder inhalers (DPIs), metered dose inhalers (MDIs) and nebulizers. MDIs, the most popular method of inhalation administration, may be used to deliver medicaments in a solubilized form or as a dispersion. Typically MDIs comprise a Freon or other relatively high vapor pressure propellant that forces aerosolized medication into the respiratory tract upon activation of the device. Unlike MDIs, DPIs generally rely entirely on the patient's inspiratory efforts to introduce a medicament in a dry powder form to the lungs. Finally, nebulizers form a medicament aerosol to be inhaled by imparting energy to a liquid solution. More recently, direct pulmonary delivery of drugs during liquid ventilation or pulmonary lavage using a fluorochemical medium has also been explored. While each of these methods and associated systems may prove effective in selected situations, inherent drawbacks, including formulation limitations, can limit their use.

Brief Summary Text (18):

The stabilized preparations of the present invention provide these and other advantages through the use of hollow and/or porous perforated microstructures that substantially reduce attractive molecular forces, such as van der Waals forces, which dominate prior art dispersion preparations. In particular, the use of perforated (or porous) microstructures or microparticulates that are permeated or filled by the surrounding fluid medium, or suspension medium, significantly reduces disruptive attractive forces between the particles. Moreover, the components of the dispersions may be selected to minimize differences in polarizabilities (i.e. reduced Hamaker constant differentials) and further stabilize the preparation. Unlike formulations comprising relatively dense, solid particles or nonporous particles (typically miconized), the dispersions of the present invention are substantially homogeneous with only minor differences in density between particles defined by the perforated microparticulates and the suspension medium.

Brief Summary Text (19):

In addition to the heretofore unappreciated advantages associated with the formation of stabilized preparations, the perforated configuration and corresponding large surface area enables the microstructures to be more easily carried by the flow of gases during inhalation than non-perforated particles of comparable size. This, in turn, enables the perforated microparticles of the present invention to be carried more efficiently into the lungs of a patient than non-perforated structures such as, miconized particles or relatively nonporous microspheres.

Detailed Description Text (6):

Typical prior art suspensions for inhalation therapy comprise solid miconized particles and small amounts (<1% w/w) of surfactant (e.g. lecithin, Span-85, oleic acid) to increase electrostatic repulsion between particles. In sharp contrast, the suspensions of the present invention are designed not to increase repulsion between particles, but rather to decrease the attractive forces between particles. The

principal forces driving flocculation in nonaqueous media are van der Waals attractive forces. Van der Waals forces are quantum mechanical in origin, and can be visualized as attractions between fluctuating dipoles (i.e. induced dipole-induced dipole interactions). Dispersion forces are extremely short-range and scale as the sixth power of the distance between atoms. When two macroscopic bodies approach one another the dispersion attractions between the atoms sums up. The resulting force is of considerably longer range, and depends on the geometry of the interacting bodies.

Detailed Description Text (18):

The perforated microstructures of the present invention may also be used to stabilize dilute suspensions of micronized bioactive agents. In such embodiments the perforated microstructures may be added to increase the volume fraction of particles in the suspension, thereby increasing suspension stability to creaming or sedimentation. Further, in these embodiments the incorporated microstructures may also act in preventing close approach (aggregation) of the micronized drug particles. It should be appreciated that, the perforated microstructures incorporated in such embodiments do not necessarily comprise a bioactive agent. Rather, they may be formed exclusively of various excipients, including surfactants.

Detailed Description Text (33):

Compatible nonionic detergents comprise: sorbitan esters including sorbitan trioleate (Span.RTM. 85), sorbitan sesquioleate, sorbitan monooleate, sorbitan monolaurate, polyoxyethylene (20) sorbitan monolaurate, and polyoxyethylene (20) sorbitan monooleate, oleyl polyoxyethylene (2) ether, stearyl polyoxyethylene (2) ether, lauryl polyoxyethylene (4) ether, glycerol esters, and sucrose esters. Other suitable nonionic detergents can be easily identified using McCutcheon's Emulsifiers and Detergents (McPublishing Co., Glen Rock, N.J.) which is incorporated herein in its entirety. Preferred block copolymers include diblock and triblock copolymers of polyoxyethylene and polyoxypropylene, including poloxamer 188 (Pluronic.RTM. F-68), poloxamer 407 (Pluronic.RTM. F-127), and poloxamer 338. Ionic surfactants such as sodium sulfosuccinate, and fatty acid soaps may also be utilized. In preferred embodiments, the microstructures may comprise oleic acid or its alkali salt.

Detailed Description Text (45):

The selected bioactive agent(s) may comprise, be associated with, or incorporated in, the perforated microstructures in any form that provides the desired efficacy and is compatible with the chosen production techniques. As used herein, the terms "associate" or "associating" mean that the structural matrix or perforated microstructure may comprise, incorporate, adsorb, absorb, be coated with or be formed by the bioactive agent. Where appropriate, the medicaments may be used in the form of salts (e.g. alkali metal or amine salts or as acid addition salts) or as esters or as solvates (hydrates). In this regard, the form of the bioactive agents may be selected to optimize the activity and/or stability of the medicament and/or to minimize the solubility of the medicament in the suspension medium. It will further be appreciated that, the aerosolized formulations according to the invention may, if desired, contain a combination of two or more active ingredients. The agents may be provided in combination in a single species of perforated microstructure or individually in separate species of perforated microstructures that are combined in the suspension medium. For example, two or more bioactive agents may be incorporated in a single feed stock preparation and spray dried to provide a single microstructure species comprising a plurality of medicaments. Conversely, the individual medicaments could be added to separate stocks and spray dried separately to provide a plurality of microstructure species with different compositions. These individual species could be added to the propellant medium in any desired proportion and placed in the aerosol delivery system as described below. Further, as briefly mentioned above, the perforated microstructures (with or without an associated medicament) may be combined with one or more conventionally

micronized bioactive agents to provide the desired dispersion stability.

Other Reference Publication (2):

Donna L. French et al. "The Influence of Formulation on Emission, Deaggregation and Deposition of Dry Powders for Inhalation," J. Aerosol Sci., vol. 27, No. 5, pp. 769-783 (1996).

[First Hit](#)   [Fwd Refs](#)

L13: Entry 26 of 28

File: USPT

Apr 14, 1998

DOCUMENT-IDENTIFIER: US 5738865 A

TITLE: Controlled release insufflation carrier for medicaments

Brief Summary Text (9):

Increasing attention is now being given in the art to dry powder inhalers.

Brief Summary Text (14):

It would be considered most advantageous in the art to provide new dry powder inhalation formulations which are capable of providing a slow, continuous release of drug while also being biodegradable or expellable from the pulmonary or nasal tract, and in which the active ingredient would be relatively bioavailable.

Brief Summary Text (17):

It is a further object of the present invention to provide a dry powder for oral or nasal inhalation or insufflation which comprises a cohesive composite of carrier and medicament, which provides a controlled release of medicament from the carrier in-vivo.

Brief Summary Text (20):

It is a further object of the present invention to provide a dry powder for inhalation therapy which is bioadhesive and which provides a controlled release of medicament when administered in-vivo.

Brief Summary Text (34):

In general, it has been recognized in the art that dry powder inhalation or insufflation formulations must consist of particles of a size of about 2 microns in diameter in order for the particles, when inhaled, to reach the alveoli of the lungs. Particles larger than 10 microns in diameter are not able to reach the deep lung when inhaled because they are collected on the back of the throat and upper airways in humans, whereas those less than 0.5 microns tend to be re-breathed or exhaled). It is a surprising discovery of this invention, therefore, that when particles are formulated which exhibit bioadhesive release characteristics like those of the present invention, particles in the range of about 0.1 micron do not tend to be exhaled and are suitable for use in inhalation therapy.

Brief Summary Text (36):

It has been found that the dry powder inhalation devices utilized in the prior art are not able to efficiently provide a dose of drug to the alveoli because they do not create enough turbulence. A high turbulence is needed to create shear conditions sufficient to isolate discrete drug particles of a size in the respirable fraction. Generally, one can expect that only 10-15% of the drug payload will be delivered into the deep lung areas for conventional devices, although this can be increased to 40-50% or more in newer devices. Further, due in part to the low efficiency of the delivery of drug to the deep lung areas, and partly due to prior art dry powder formulations themselves, many dry powder inhalation devices are considered to provide too variable a dose of medicament to be considered useful for many such medicaments.

Brief Summary Text (38):

The invention relates in part to a dry powder inhalation/insufflation formulation

which comprises a cohesive composite of a medicament together with a non-segregating carrier. In the aspects of the invention where the dry powder inhalation formulations of the invention are intended for lung delivery, at least 80% of the discrete polysaccharide/drug particles have an average particle size of from about 0.1 to about 10 microns. In other aspects where the drug/polysaccharide fine particles are carried on coarse saccharide particles, the composite particles will have an average particle size of from about 45 to about 355 microns, and preferably from about 63 to about 125 microns. In this manner, the cohesive composite particles, when inhaled via any dry powder inhalation device known in the art, will either be collected and absorbed mainly in the tracheo-bronchial region of the respiratory tract for 2-10 micron particles and in the deep lung for <2 micron particles. The carrier which is utilized to prepare the cohesive composite particles is one which will provide a controlled release of medicament when the particles are exposed to an environmental fluid, e.g., a dissolution liquid, mobile phase or water in an in-vitro dissolution apparatus, or, in the fluids present in the respiratory tract, and in particular, in the tracheo-bronchial regions in-vivo.

Brief Summary Text (44):

Starch and starch fragments are especially preferred polysaccharides and the combination of xanthan gum with locust bean gum is an especially preferred gum combination. In our previous patents, we described and claimed the synergistic combination of heteropolysaccharide/homopolysaccharide gums for incorporation into solid oral dosage forms. Thus, in certain embodiments, the controlled release properties of the dry powder inhalation formulation are optimized when the ratio of heteropolysaccharide gum to galactomannan gum is from about 3:1 to about 1:3, and most preferably about 1:1. However, in this embodiment, the controlled release carrier of the invention may comprise from about 1% to about 99% by weight heteropolysaccharide gum and from about 99% to about 1% by weight homopolysaccharide gum.

Brief Summary Text (47):

Suitable pharmaceutically acceptable non-ionic surfactants such as, for example, polyoxyethylene compounds, lecithin, ethoxylated alcohols, ethoxylated esters, ethoxylated amides, polyoxypropylene compounds, propoxylated alcohols, ethoxylated/propoxylated block polymers, and propoxylated esters, alkanolamides, amine oxides, fatty acid esters of polyhydric alcohols, ethylene glycol esters, diethylene glycol esters, propylene glycol esters, glyceryl esters, polyglyceryl fatty acid esters, SPAN's (e.g., sorbitan esters), TWEEN's sucrose esters, and glucose (dextrose) esters. The surfactant should be non-sternutatory so as not to irritate the mucous membranes.

Brief Summary Text (48):

Other suitable pharmaceutically acceptable surfactants/co-solvents (solubilizing) agents include acacia, benzalkonium chloride, cholesterol, emulsifying wax, docusate sodium, glyceryl monostearate, lanolin alcohols, lecithin, poloxamer, poloxyethylene castor oil derivatives, poloxyethylene sorbitan fatty acid esters, poloxyethylene stearates, sodium lauryl sulfates, sorbitan esters, stearic acid, and triethanolamine.

Brief Summary Text (52):

The dry powder insufflation/inhalation formulations are preferably prepared via a wet granulation method to obtain composite particles of medicament and carrier in the desired respirable size range (depending on whether designed for naso-pharyngeal depositions, shallow lung or deep lung deposition, or some combination thereof). In certain embodiments, such composites are provided via the use of one or more wet granulation steps. However, the dry powder formulations of the invention may be prepared according to any technique to yield an acceptable product.

Brief Summary Text (54):

a drug is dissolved in a suitable solvent (e.g., water, alcohol, mixed solvents, etc.) and added to a polysaccharide or polysaccharide mixture in the desired size range. For oral insufflations, this will be 80% less than 10 microns; for nasal insufflations, the desired size range will be about 10 to about 355 microns. Where required, the polysaccharides can be sieved to obtain the required size. In cases where the polysaccharide requires size reduction, a suitable milling method may be used, such as fluid energy milling (e.g., with micronizers or jet mills); hammer milling, vibrational milling, ball milling, etc. In some cases, it will be more beneficial to carry out the milling procedure below the glass transition temperature or for other reasons, to use cryogenic milling (using liquid CO.sub.2, N.sub.2, or other suitable cooling aid).

Brief Summary Text (63):

A wide variety of medicaments can be utilized in the dry powder inhalation/insufflation formulations of the present invention. In general, medicaments which may be used in conjunction with the invention are preferably locally acting on the pulmonary tissue and/or be absorbable from the respiratory tract in sufficient quantities to provide a therapeutically desired effect. Such medicaments include the following:

Brief Summary Text (87):

Another inhaler device is disclosed in U.S. Pat. No. 4,524,769 (Wetterlin), hereby incorporated by reference. Wetterlin describes a dosage inhaler for administering a micronized pharmacologically active substance to a patient. The inhaler includes a gas conduit means through which gas passes for carrying the micronized substance to be administered. The inhaler further includes a membrane having a plurality of preselected perforated portions, each portion adapted to hold and dispense a reproducible unit dose of less than 50 mg of said active substance, in dry powder form. The powder particles have a particle size of less than 5 micrometers. The membrane is movably connected to the gas conduit means so that one of the preselected portions can be positioned within the gas conduit means so that the substance held in the preselected portion may be dispensed. The remaining preselected portion can be in a position external to said gas conduit means to receive said active substance. The membrane is movable through a plurality of positions whereby each preselected portion of the membrane can be successively positioned within the gas conduit to dispense the unit dose of the active substance held therein. Each preselected portion from which the active substance has been dispensed can be moved to said external position to receive active substance.

[First Hit](#)   [Fwd Refs](#)**End of Result Set**

L13: Entry 28 of 28

File: USPT

Oct 11, 1994

DOCUMENT-IDENTIFIER: US 5354934 A

TITLE: Pulmonary administration of erythropoietin

Detailed Description Text (8):

Particle size is an important consideration in achieving particle deposition in the distal lung regions. Porush et al., reported that to reach the alveoli, small particles should be 0.5 .mu.m to 7 .mu.m in diameter [(1960) Amer. Pharm. Assoc. Sci. Ed., vol. 49, p. 70]. Later, the preferred particle size for such deposition was reported to be less than 5 .mu.m in diameter [Newman et al., (1983) Thorax, vol. 38, p. 881]. Along these lines, Utsumi et al. (PCT Patent Application No. WO 91/16038) disclosed the preparation of an aerosol composition comprised of solid, micronized human interferon or interleukin for pulmonary administration. In their preparation, the particles ranged from 0.5 .mu.m to 10 .mu.m in median diameter.

Detailed Description Text (9):

Devices capable of depositing aerosolized EPO formulations in the alveoli of a patient include nebulizers, metered dose inhalers, and powder inhalers. Other devices suitable for directing the pulmonary administration of EPO are also known in the art. All such devices require the use of formulations suitable for the dispensing of EPO in an aerosol. Such aerosols can be comprised of either solutions (both aqueous and non-aqueous) or solid particles. Nebulizers are useful in producing aerosols from solutions, while metered dose inhalers, dry powder inhalers, etc. are effective in generating small particle aerosols. Typically, each formulation is specific to the type of device employed and may involve the use of an appropriate propellant material, in addition to the usual diluents, adjuvants and/or carriers useful in EPO therapy. EPO formulations which can be utilized in the most common types of pulmonary dispensing devices to practice this invention are now described.

Detailed Description Text (12):

The nebulizer formulation may also contain a surfactant to reduce or prevent surface induced aggregation of the protein caused by atomization of the solution in forming the aerosol. Various conventional surfactants can be employed, such as polyoxyethylene fatty acid esters and alcohols, and polyoxyethylene sorbitan fatty acid esters. Amounts will generally range between 0.001% and 4% by weight of the formulation. An especially preferred surfactant for purposes of this invention is polyoxyethylene sorbitan monooleate.



## Hit List

Clear	Generate Collection	Print	Fwd Refs	Bkwd Refs
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Search Results - Record(s) 1 through 28 of 28 returned.

☐ 1. Document ID: US 6740655 B2

Using default format because multiple data bases are involved.

L13: Entry 1 of 28

File: USPT

May 25, 2004

US-PAT-NO: 6740655

DOCUMENT-IDENTIFIER: US 6740655 B2

TITLE: Pyrimidine carboxamides useful as inhibitors of PDE4 isozymes

DATE-ISSUED: May 25, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Magee; Thomas Victor	Mystic	CT		
Marfat; Anthony	Mystic	CT		
Chambers; Robert James	Mystic	CT		

US-CL-CURRENT: 514/255.05; 514/269, 544/319

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw D
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☐ 2. Document ID: US 6699862 B1

L13: Entry 2 of 28

File: USPT

Mar 2, 2004

US-PAT-NO: 6699862

DOCUMENT-IDENTIFIER: US 6699862 B1

TITLE: Indolyl-2-phenyl bisamidines useful as antiproliferative agents

DATE-ISSUED: March 2, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Goldstein; Steven W.	Noank	CT		
Mylari; Banauara L.	Waterford	CT		
Perez; Jose R.	Salem	CT		
Glazer; Edward A.	Waterford	CT		

US-CL-CURRENT: 514/235.2; 514/254.09, 514/256, 514/402, 514/415, 544/143, 544/296,

544/333, 548/312.1, 548/505

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMIC	Draw D
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☐ 3. Document ID: US 6668527 B2

L13: Entry 3 of 28

File: USPT

Dec 30, 2003

US-PAT-NO: 6668527

DOCUMENT-IDENTIFIER: US 6668527 B2

TITLE: Non-peptidyl inhibitors of VLA-4 dependent cell binding useful in treating inflammatory, autoimmune, and respiratory diseases

DATE-ISSUED: December 30, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Duplantier; Allen J.	Ledyard	CT		
Chupak; Louis S.	Old Saybrook	CT		
Milici; Anthony J.	Branford	CT		
Lau; Wan F.	Noank	CT		

US-CL-CURRENT: 514/378; 546/271.4, 546/272.1, 548/215, 548/240

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMIC	Draw D
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☐ 4. Document ID: US 6667331 B2

L13: Entry 4 of 28

File: USPT

Dec 23, 2003

US-PAT-NO: 6667331

DOCUMENT-IDENTIFIER: US 6667331 B2

TITLE: Non-peptidyl inhibitors of VLA-4 dependent cell binding useful in treating inflammatory, autoimmune, and respiratory diseases

DATE-ISSUED: December 23, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Duplantier; Allen J.	Ledyard	CT		
Chupak; Louis S.	Old Saybrook	CT		
Milici; Anthony J.	Branford	CT		
Lau; Wan F.	Noank	CT		

US-CL-CURRENT: 514/378; 514/374, 514/408, 546/271.4, 546/272.1, 548/215, 548/240, 548/517, 548/518

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMIC	Draw D
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☐ 5. Document ID: US 6649633 B2

L13: Entry 5 of 28

File: USPT

Nov 18, 2003

US-PAT-NO: 6649633

DOCUMENT-IDENTIFIER: US 6649633 B2

TITLE: Nicotinamide biaryl derivatives useful as inhibitors of PDE4 isozymes

DATE-ISSUED: November 18, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chambers; Robert J.	Mystic	CT		
Marfat; Anthony	Mystic	CT		
Magee; Thomas V.	Mystic	CT		

US-CL-CURRENT: 514/337; 514/338, 514/355, 514/357, 514/358, 546/283.4, 546/283.7,  
546/284.1, 546/316, 546/329, 546/347

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw. De
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☐ 6. Document ID: US 6645528 B1

L13: Entry 6 of 28

File: USPT

Nov 11, 2003

US-PAT-NO: 6645528

DOCUMENT-IDENTIFIER: US 6645528 B1

**\*\* See image for Certificate of Correction \*\***

TITLE: Porous drug matrices and methods of manufacture thereof

DATE-ISSUED: November 11, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Straub; Julie	Winchester	MA		
Bernstein; Howard	Cambridge	MA		
Chickering, III; Donald E.	Framingham	MA		
Khattak; Sarwat	Cambridge	MA		
Randall; Greg	Stoneham	MA		

US-CL-CURRENT: 424/489; 514/951

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw. De
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☐ 7. Document ID: US 6638495 B2

L13: Entry 7 of 28

File: USPT

Oct 28, 2003

US-PAT-NO: 6638495

DOCUMENT-IDENTIFIER: US 6638495 B2

TITLE: Stabilized preparation for use in metered dose inhalers

DATE-ISSUED: October 28, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weers; Jeffry G.	San Diego	CA		
Schutt; Ernest G.	San Diego	CA		
Dellamary; Luis A.	San Marcos	CA		
Tarara; Thomas E.	San Diego	CA		
Kabalnov; Alexey	Corvallis	OR		

US-CL-CURRENT: 424/45; 128/200.14, 222/402.2, 424/43, 424/46, 514/937

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
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☐ 8. Document ID: US 6630169 B1

L13: Entry 8 of 28

File: USPT

Oct 7, 2003

US-PAT-NO: 6630169

DOCUMENT-IDENTIFIER: US 6630169 B1

TITLE: Particulate delivery systems and methods of use

DATE-ISSUED: October 7, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bot; Adrian I.	San Diego	CA		
Tarara; Thomas E.	San Diego	CA		
Weers; Jeffry G.	San Diego	CA		
Kabalnov; Alexev	Corvalis	OR		
Schutt; Ernest G.	San Diego	CA		
Dellamary; Luis A.	San Marcos	CA		

US-CL-CURRENT: 424/489; 424/426, 424/434, 424/450, 424/490

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
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☐ 9. Document ID: US 6593344 B1

L13: Entry 9 of 28

File: USPT

Jul 15, 2003

US-PAT-NO: 6593344

DOCUMENT-IDENTIFIER: US 6593344 B1

TITLE: Piperadiny1-substituted pyridylalkane, alkene and alkine carboxamides

DATE-ISSUED: July 15, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Biedermann; Elfi	Vaterstetten			DE
Hasmann; Max	Neuried			DE
Loser; Roland	Feldafing			DE
Rattel; Benno	Munich			DE
Reiter; Friedemann	Putzbrunn			DE
Schein; Barbara	Neufahrn			DE
Seibel; Klaus	Grafelfing			DE
Vogt; Klaus	Munich			DE
Wosikowski; Katja	Poing			DE
Schemainda; Isabel	Munich			DE

US-CL-CURRENT: [514/318](#); [514/231.5](#), [544/124](#), [546/193](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 10. Document ID: US 6565885 B1

L13: Entry 10 of 28

File: USPT

May 20, 2003

US-PAT-NO: 6565885

DOCUMENT-IDENTIFIER: US 6565885 B1

TITLE: Methods of spray drying pharmaceutical compositions

DATE-ISSUED: May 20, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tarara; Thomas E.	San Diego	CA		
Weers; Jeffry G.	San Diego	CA		
Kabalnov; Alexey	Corvallis	OR		
Schutt; Ernest G.	San Diego	CA		
Dellamary; Luis A.	San Marcos	CA		

US-CL-CURRENT: [424/489](#); [424/43](#), [424/45](#), [424/450](#), [424/487](#), [424/9.52](#), [514/3](#), [514/4](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 11. Document ID: US 6559168 B2

L13: Entry 11 of 28

File: USPT

May 6, 2003

US-PAT-NO: 6559168

DOCUMENT-IDENTIFIER: US 6559168 B2

TITLE: Thiazolyl-acid amide derivatives useful as inhibitors of PDE4 isozymes

DATE-ISSUED: May 6, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Marfat; Anthony	Mystic	CT		
McKechney; Michael William	Fairport	NY		

US-CL-CURRENT: 514/338; 514/342, 514/369, 514/370, 546/269.7, 548/188, 548/195,  
548/196

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 12. Document ID: US 6506572 B2

L13: Entry 12 of 28

File: USPT

Jan 14, 2003

US-PAT-NO: 6506572

DOCUMENT-IDENTIFIER: US 6506572 B2

TITLE: Inhibitors of cellular niacinamide mononucleotide formation and their use in cancer therapy

DATE-ISSUED: January 14, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Biedermann; Elfi	Vaterstetten			DE
Eisenburger; Rolf	Kirchseeon			DE
Hasmann; Max	Neuried			DE
Loser; Roland	Feldafing			DE
Rattel; Benno	Munich			DE
Reiter; Friedemann	Putzbrunn			DE
Schein; Barbara	Neufahrn			DE
Schemainda; Isabel	Munich			DE
Schulz; Michael	Aschheim			DE
Seibel; Klaus	Grafelfing-			DE
Vogt; Klaus	Munich			DE
Wosikowski; Katja	Poing			DE

US-CL-CURRENT: 435/15; 424/172.1, 424/573, 435/29, 435/4, 514/43, 536/17.4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 13. Document ID: US 6451816 B1

L13: Entry 13 of 28

File: USPT

Sep 17, 2002

US-PAT-NO: 6451816

DOCUMENT-IDENTIFIER: US 6451816 B1

TITLE: Use of pyridyl alkane, pyridyl alkene and/or pyridyl alkine acid amides in the treatment of tumors or for immunosuppression

DATE-ISSUED: September 17, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Biedermann; Elfi	Vaterstetten			DE
Hasmann; Max	Neuried			DE
Loser; Roland	Feldafing			DE
Rattel; Benno	Munich			DE
Reiter; Friedemann	Putzbrunn			DE
Schein; Barbara	Neufahrn			DE
Seibel; Klaus	Grafelfing			DE
Vogt; Klaus	Munich			DE

US-CL-CURRENT: [514/318](#); [514/317](#), [546/196](#), [546/197](#), [546/198](#), [546/207](#), [546/208](#)

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 14. Document ID: US 6444823 B1

L13: Entry 14 of 28

File: USPT

Sep 3, 2002

US-PAT-NO: 6444823

DOCUMENT-IDENTIFIER: US 6444823 B1

TITLE: Pyridyl alkane acid amides as cytostatics and immunosuppressives

DATE-ISSUED: September 3, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Biedermann; Elfi	Vaterstetten			DE
Hasmann; Max	Neuried			DE
Loser; Roland	Feldafing			DE
Rattel; Benno	Munich			DE
Reiter; Friedemann	Putzbrunn			DE
Schein; Barbara	Neufahrn			DE
Seibel; Klaus	Grafelfing			DE
Vogt; Klaus	Munich			DE

US-CL-CURRENT: 546/208; 546/207

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachment	Claims	KMCC	Draw D
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☐ 15. Document ID: US 6433040 B1

L13: Entry 15 of 28

File: USPT

Aug 13, 2002

US-PAT-NO: 6433040

DOCUMENT-IDENTIFIER: US 6433040 B1

TITLE: Stabilized bioactive preparations and methods of use

DATE-ISSUED: August 13, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dellamary; Luis A.	San Marcos	CA		
Tarara; Thomas E.	San Diego	CA		
Kabalnov; Alexey	Corvallis	OR		
Weers; Jeffry G.	San Diego	CA		
Schutt; Ernest G.	San Diego	CA		

US-CL-CURRENT: 523/218; 128/203.15, 424/46, 424/499, 424/501, 424/502, 523/122,  
523/223, 524/462, 524/795

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachment	Claims	KMCC	Draw D
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☐ 16. Document ID: US 6395300 B1

L13: Entry 16 of 28

File: USPT

May 28, 2002

US-PAT-NO: 6395300

DOCUMENT-IDENTIFIER: US 6395300 B1

TITLE: Porous drug matrices and methods of manufacture thereof

DATE-ISSUED: May 28, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Straub; Julie	Winchester	MA		
Bernstein; Howard	Cambridge	MA		
Chickering, III; Donald E.	Framingham	MA		
Khattak; Sarwat	Cambridge	MA		
Randall; Greg	Stoneham	MA		

US-CL-CURRENT: 424/489; 264/5



Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw. De
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☐ 17. Document ID: US 6392036 B1

L13: Entry 17 of 28

File: USPT

May 21, 2002

US-PAT-NO: 6392036

DOCUMENT-IDENTIFIER: US 6392036 B1

**\*\* See image for Certificate of Correction \*\***

TITLE: Dry heat sterilization of a glucocorticosteroid

DATE-ISSUED: May 21, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Karlsson; Ann-Kristin	Staffanstorp			SE
Larrivee-Elkins; Cheryl	Framingham	MA		
Molin; Ove	Huddinge			SE

US-CL-CURRENT: 540/63; 540/84, 540/85

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw. De
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☐ 18. Document ID: US 6391872 B1

L13: Entry 18 of 28

File: USPT

May 21, 2002

US-PAT-NO: 6391872

DOCUMENT-IDENTIFIER: US 6391872 B1

TITLE: Indazole bioisostere replacement of catechol in therapeutically active compounds

DATE-ISSUED: May 21, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Marfat; Anthony	Mystic	CT		

US-CL-CURRENT: 514/218; 514/253.01, 514/254.06, 514/257, 514/403, 540/575, 544/251, 544/363, 544/371, 548/361.1, 548/362.5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw. De
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☐ 19. Document ID: US 6387394 B1

L13: Entry 19 of 28

File: USPT

May 14, 2002

US-PAT-NO: 6387394

DOCUMENT-IDENTIFIER: US 6387394 B1

TITLE: Controlled release insufflation carrier for medicaments

DATE-ISSUED: May 14, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Baichwal; Anand	Wappingers Falls	NY		
Staniforth; John N.	Bath			GB

US-CL-CURRENT: 424/440; 424/434, 424/499, 424/500

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMIC	Draw D
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☐ 20. Document ID: US 6355662 B1

L13: Entry 20 of 28

File: USPT

Mar 12, 2002

US-PAT-NO: 6355662

DOCUMENT-IDENTIFIER: US 6355662 B1

TITLE: Non-peptidyl inhibitors of a VLA-4 dependent cell binding useful in treating inflammatory, autoimmune, and respiratory diseases

DATE-ISSUED: March 12, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Duplantier; Allen Jacob	Ledyard	CT		
Milici; Anthony John	Branford	CT		
Chupak; Louis Stanley	Old Saybrook	CT		

US-CL-CURRENT: 514/374; 514/596, 514/597, 548/235

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMIC	Draw D
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☐ 21. Document ID: US 6329412 B1

L13: Entry 21 of 28

File: USPT

Dec 11, 2001

US-PAT-NO: 6329412

DOCUMENT-IDENTIFIER: US 6329412 B1

TITLE: Bisamidine compounds as antiproliferative agents

DATE-ISSUED: December 11, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Goldstein; Steven W.	Noank	CT		
Mylari; Banauara L.	Waterford	CT		
Perez; Jose R.	Salem	CT		
Glazer; Edward A.	Waterford	CT		

US-CL-CURRENT: 514/385; 514/394, 514/415

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMIC	Draw D
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☐ 22. Document ID: US 6309623 B1

L13: Entry 22 of 28

File: USPT

Oct 30, 2001

US-PAT-NO: 6309623

DOCUMENT-IDENTIFIER: US 6309623 B1

TITLE: Stabilized preparations for use in metered dose inhalers

DATE-ISSUED: October 30, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weers; Jeffry G.	San Diego	CA		
Schutt; Ernest G.	San Diego	CA		
Dellamary; Luis A.	San Marcos	CA		
Tarara; Thomas E.	San Diego	CA		
Kabalnov; Alexey	Corvallis	OR		

US-CL-CURRENT: 424/45; 424/46, 424/489

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMIC	Draw D
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☐ 23. Document ID: US 6306887 B1

L13: Entry 23 of 28

File: USPT

Oct 23, 2001

US-PAT-NO: 6306887

DOCUMENT-IDENTIFIER: US 6306887 B1

TITLE: Non-peptidyl inhibitors of VLA-4 dependent cell binding useful in treating inflammatory, autoimmune, and respiratory diseases

DATE-ISSUED: October 23, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chupak; Louis S.	Old Saybrook	CT		
Duplantier; Allen J.	Ledyard	CT		

Milici; Anthony J.                      Branford                      CT

US-CL-CURRENT: 514/378; 514/365, 514/372, 514/374, 514/381, 514/383, 514/385,  
514/396, 514/403, 514/461, 548/125, 548/146, 548/206, 548/215, 548/240, 548/250,  
548/252, 548/262.2, 548/300.1, 548/311.1, 548/356.1, 548/364.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. D
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☐ 24. Document ID: US 6241969 B1

L13: Entry 24 of 28

File: USPT

Jun 5, 2001

US-PAT-NO: 6241969

DOCUMENT-IDENTIFIER: US 6241969 B1

TITLE: Aqueous compositions containing corticosteroids for nasal and pulmonary delivery

DATE-ISSUED: June 5, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Saidi; Zahir	Philadelphia	PA		
Klyashchitsky; Boris	Newark	DE		

US-CL-CURRENT: 424/45; 424/198.1, 424/450, 514/179, 514/180

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. D
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☐ 25. Document ID: US 6001336 A

L13: Entry 25 of 28

File: USPT

Dec 14, 1999

US-PAT-NO: 6001336

DOCUMENT-IDENTIFIER: US 6001336 A

TITLE: Processes for spray drying aqueous suspensions of hydrophobic drugs and compositions thereof

DATE-ISSUED: December 14, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gordon; Marc S.	Sunnyvale	CA		

US-CL-CURRENT: 424/46; 424/45, 424/489, 424/499, 514/938, 514/958

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. D
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☐ 26. Document ID: US 5738865 A

L13: Entry 26 of 28

File: USPT

Apr 14, 1998

US-PAT-NO: 5738865

DOCUMENT-IDENTIFIER: US 5738865 A

TITLE: Controlled release insufflation carrier for medicaments

DATE-ISSUED: April 14, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Baichwal; Anand	Wappingers Falls	NY		
Staniforth; John N.	Bath			GB2

US-CL-CURRENT: 424/440; 424/434, 424/499, 424/500

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw D
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☐ 27. Document ID: US 5612053 A

L13: Entry 27 of 28

File: USPT

Mar 18, 1997

US-PAT-NO: 5612053

DOCUMENT-IDENTIFIER: US 5612053 A

TITLE: Controlled release insufflation carrier for medicaments

DATE-ISSUED: March 18, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Baichwal; Anand	Wappingers Falls	NY		
Staniforth; John N.	Bath			GB2

US-CL-CURRENT: 424/440; 424/434, 424/488, 424/499, 424/500

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw D
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☐ 28. Document ID: US 5354934 A

L13: Entry 28 of 28

File: USPT

Oct 11, 1994

US-PAT-NO: 5354934

DOCUMENT-IDENTIFIER: US 5354934 A

TITLE: Pulmonary administration of erythropoietin

DATE-ISSUED: October 11, 1994

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Pitt; Colin G.	Thousand Oaks	CA		
Platz; Robert M.	Half Moon Bay	CA		

US-CL-CURRENT: 514/8; 424/499, 424/85.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequence	Attachments	Claims	KIMC	Draw. D.
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